U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

RECORD OF DECISION
WINTER USE PLAN AND SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

YELLOWSTONE NATIONAL PARK

Idaho, Montana, Wyoming

The Department of the Interior, National Park Service (NPS) has prepared this Record of Decision (ROD) for the *Winter Use Plan/Supplemental Environmental Impact Statement* (Plan/SEIS, or SEIS) for Yellowstone National Park (the park) in accordance with the requirements of the National Environmental Policy Act of 1969, as amended (NEPA); its implementing regulations (40 CFR 1500-1508); the Department of the Interior NEPA regulations (43 CFR Part 46); and NPS Director's Order 12, Conservation Planning, Environmental Impact Analysis, and Decision-Making and its accompanying Handbook. This ROD includes a summary of the purpose and need for action, synopses of alternatives considered, a description of the Selected Alternative, a listing of measures to minimize environmental harm, the basis for the decision, and a description of the environmentally preferable alternative. This Record of Decision is not the final agency action for those elements of the Plan/SEIS that require promulgation of regulations to be effective. Promulgation of such regulations will constitute the final agency action for such elements of the Plan/SEIS.

BACKGROUND

Winter use in Yellowstone National Park, specifically issues related to snowmobiles and snowcoaches (collectively known as oversnow vehicles or OSVs), has been the subject of debate for more than 75 years. At least 12 times since 1930, the NPS and park stakeholders have discussed winter use in Yellowstone. Interest in accessing the park in the winter began in the early 1930s and grew throughout the years. In the 1970s, 1980s, and early 1990s, snowmobile use in the park grew consistently, with the use of snowcoaches following in popularity. Historically, the increase in the use of these vehicles to access the park brought unanticipated problems including air and noise pollution, wildlife harassment, and conflicts with other users, as documented in past planning efforts. The 1974 Master Plan was the first planning effort to address the problems and management of OSV use in the park (NPS 1974). Since then, a series of planning processes have examined winter use in Yellowstone. A detailed description of these processes can be found on the park's winter use website at http://www.nps.gov/yell/planyourvisit/winteruse.htm.

In 2009, following litigation over a 2007 winter use plan and rule, the NPS completed an Interim Winter Use Plan/Environmental Assessment and Finding of No Significant Impact, and promulgated an interim rule. The interim plan and rule allowed access for up to 318 snowmobiles and 78 snowcoaches into Yellowstone per day during the 2009/2010 and 2010/2011 winter seasons. All snowmobiles and snowcoaches were required to be guided and snowmobiles were required to meet best available technology (BAT) requirements. In addition, the rule provided for motorized OSV travel over Sylvan

Pass and Yellowstone's East Entrance Road as agreed to by the Sylvan Pass Study Group (the NPS, State of Wyoming, Park County, Wyoming, and the City of Cody, Wyoming).

The 2009 interim plan and rule were challenged by the State of Wyoming and Park County, Wyoming. On September 17, 2010, a Wyoming court issued a ruling in favor of the NPS on the interim plan and rule. This ruling was affirmed by the 10th Circuit Court of Appeals in February 2012.

In May 2011, the NPS released a draft Winter Use Plan/Environmental Impact Statement (draft Plan/EIS). Following the public comment period on the draft Plan/EIS, the NPS determined that additional study was needed prior to putting a long-term plan in place. As a result, in November 2011 the NPS released a final 2011 Winter Use Plan/EIS with a preferred alternative applicable only for the 2011/2012 winter season, for which the park would operate under the same rules and restrictions in place during the previous two seasons. In December 2011, a ROD and final regulation implementing the preferred alternative were issued.

The NPS published a Notice of Intent to prepare a Winter Use Plan/Supplemental Environmental Impact Statement in the Federal Register on February 8, 2012. On June 29, 2012, the NPS released a draft Winter Use Plan/Supplemental Environmental Impact Statement (draft Plan/SEIS) and published a Notice of Availability in the Federal Register (77 FR 38824). Public comment on the draft Plan/SEIS closed on August 20, 2012. Numerous commenters requested additional time to consider the new management concept presented in the preferred alternative of the draft Plan/SEIS (management by transportation events) and respond substantively to it. Accordingly, the NPS decided to reopen public comment on the draft Plan/SEIS for an additional 30 days (77 FR 55213). Mindful of the short amount of time left before the December 15, 2012, opening of the 2012/2013 winter season and desiring to take the time necessary to make a reasoned, sustainable long-term decision on winter use, the NPS amended the December 2011 ROD to allow use during the 2012/2013 season. Using the analyses contained in Alternative 2 in the final 2011 Winter Use Plan/EIS and updated information gathered during the 2011/2012 winter season, the NPS promulgated a new rule to extend for one additional winter season, the 2011/2012 daily entry limits and operating requirements. As of March 15, 2013, no motorized OSV use can be allowed in the park unless a new ROD is signed and a new regulation is promulgated.

The NPS released a final Plan/SEIS on February 22, 2013. This ROD selects the preferred alternative in the final Plan/SEIS, with several minor modifications, for implementation (described hereafter as the Selected Alternative).

PURPOSE OF AND NEED FOR ACTION

As stated in the Plan/SEIS, the purpose of the Plan/SEIS is to establish a management framework that allows the public to experience the unique winter resources and values at Yellowstone National Park. The final Plan/SEIS will be used to determine whether motorized winter use in the interior of the park is appropriate, and if so, the type, extent, and location of this use.

The NPS provides opportunities for people to experience the park in the winter, but access to most of the park in the winter is limited by distance and the harsh winter environment, which present challenges to safety and park operations. The park offers unique winter experiences that are distinct from other times of the year. In the past, the park has provided access to OSV users; however, the regulatory authority for OSV use at Yellowstone expired on March 15, 2013. Therefore, the park is developing this plan because a decision is needed about whether OSV use should continue, and if so, how to manage use to protect resources and values, and how to provide for visitor use and enjoyment.

The following objectives were developed for the Plan/SEIS:

Visitor Use, Experience, and Accessibility

- Provide the opportunity for visitors to experience and be inspired by Yellowstone's unique winter resources and values while ensuring resource protection.
- Increase visitor understanding and appreciation of the park's winter resources.
- Provide access for winter opportunities in the park that are appropriate and universally accessible.

Resources

- Wildlife: Manage winter use so that it does not disrupt the winter wildlife ecology, including sensitive species.
- Sound: Manage winter use to protect naturally occurring sounds, and to minimize human-caused sounds.
- Air Quality: Manage winter use to minimize impacts on resources that may be affected by air pollution, including visibility and aquatic systems.
- Wilderness: Manage winter use to protect wilderness character and values.
- Develop and implement an adaptive management program that includes monitoring the condition of resources.

Health and Safety

- Manage access in the winter for the safety of all visitors and employees, including limiting impacts from emissions, noise, and known hazards.

Coordination and Cooperation

- Improve coordination and communication regarding winter use management with park partners, gateway communities, and other stakeholders.

Park Operations and Management

- Promote advances in OSV technology that will reduce impacts and facilitate continuous improvement of technology over time.
- Provide for winter use that is consistent with the park priority to provide critical visitor services at core locations.

DEFINITIONS

Commercial Guide—A person who operates as a snowmobile or snowcoach guide for a fee or compensation and is authorized to operate in the park under a concession contract or a commercial use authorization.

Commercial Tour Operator—A person or business authorized to operate OSV tours in the park under a concession contract or a commercial use authorization.

Non-commercially Guided Snowmobile Access Program—An access program that permits duly authorized parties to enter Yellowstone National Park without the requirement of a commercial snowmobile guide. All non-commercial snowmobile operators would be required to have successfully

completed the Yellowstone Snowmobile Education Certification Program and one member of the party (the noncommercial snowmobile guide) would need to be in possession of a non-commercially guided snowmobile access permit. The non-commercially guided snowmobile access program may be adjusted or terminated based on impacts to park resources and visitor experiences.

Non-commercially Guided Snowmobile Trip—A trip that is led by a non-commercial guide and is not for profit; to the extent possible costs are evenly shared among all participants and no trip member may pay less than other participants. No trip member may be paid to participate on the trip. Trip preparation, costs, and conduct of the trip must be shared by all members of the group, including all logistics, food, fuel, equipment, transportation, vehicle shuttle, and other costs. Non-commercially guided snowmobile trips must be self-guided and may not hire commercial guides. Non-commercially guided snowmobile trips may not be used by any person or organization in any way to obtain a profit and doing so would result in the revocation of the permit and may jeopardize future non-commercially guided access to Yellowstone National Park by the non-commercial snowmobile guide and other trip members.

Non-commercial Snowmobile Access Permit—A permit that allows access to Yellowstone National Park for a single group of up to five snowmobiles for a specific date range. These permits would be awarded through an annual lottery system.

Non-commercial Snowmobile Guide—In addition to stipulations outlined below under non-commercial snowmobile operator, a non-commercial snowmobile guide must obtain and be in possession of a noncommercial snowmobile access permit as awarded and obtained through the lottery system. Noncommercial snowmobile guides are directly responsible for the actions of their group. Each noncommercial guide may lead no more than two trips per winter season, and must be at least 18 years of age by the first day of the trip. Non-commercial guides must have working knowledge of snowmobile safety, general first aid, snowmobile repair, and navigational technique. It is preferable that non-commercial guides, or another member of the trip, be familiar with Yellowstone National Park. Non-commercial snowmobile guides may not advertise for profit and may not accept a fee or any type of compensation for organizing or leading a trip. Collecting a fee (monetary compensation), payable to an individual, group, or organization for conducting, leading, or guiding a non-commercially guided snowmobile trip is not allowed. Non-commercial guides will be able to help their group travel safely through the park, and will be familiar with daily weather conditions and hand signals to warn group members about wildlife and other road hazards, indicate turns, and indicate when to turn the snowmobile on or off. They will have knowledge of basic first aid, and are equipped with similar supplies. They will employ a single file "follow-the leader" approach and communicate frequently with group members.

Non-commercial Snowmobile Operator—A person who has successfully completed the Yellowstone Snowmobile Education Certification Program (defined above) and is certified as having the requisite knowledge and skills to operate a snowmobile in Yellowstone National Park. All non-commercial snowmobile operators must be in possession of a valid state-issued motor vehicle driver's license before entering the park.

Oversnow vehicle or OSV—A snowmobile, snowcoach, or other motorized vehicle that is intended for travel primarily on snow and has been authorized by the Superintendent to operate in the park. An OSV that does not meet the definition of a snowcoach must comply with all requirements applicable to snowmobiles.

Snowcoach—A self-propelled mass transit vehicle intended for travel on snow, having a curb weight of over 1,000 pounds (450 kilograms), having a capacity of at least 8 passengers and no more than 32 passengers, plus a driver.

Snowmobile—A self-propelled vehicle intended for travel solely on snow, with a curb weight of not more than 1,000 pounds (450 kg), and which may be steered by a ski or skis in contact with the snow. All-terrain vehicles and utility-type vehicles are not snowmobiles, even if they have been modified for use on snow with track and ski systems.

Transportation Event—A transportation event is defined as one snowcoach or a group of snowmobiles (maximum group size of 10, average of 7 over the winter season). The group size of transportation events may increase from a seasonal average of 7 to 8 for snowmobiles and from a maximum of 1 to 2 for snowcoaches, not to exceed a seasonal average of 1.5 snowcoaches, if commercial tour operators use vehicles that meet voluntary enhanced emission standards (referred to as "E-BAT" in the final Plan/SEIS)..

Yellowstone Snowmobile Education Certification Program—A to-be-developed online snowmobile education program that all non-commercial snowmobile operators must complete before entering the park via snowmobile. Individuals who successfully complete the Yellowstone Snowmobile Certification Program would receive a certificate of completion, valid for the duration of the season.

ALTERNATIVES CONSIDERED

Alternatives Development Process

Alternatives analyzed in the Plan/SEIS were developed based on the results of internal and public scoping, information from the Yellowstone Science Advisory Team and resource workshops, input from cooperating agencies, and past planning efforts. The action alternatives meet, to a large degree, the management objectives of the park, while also meeting the overall purpose of and need for action. Alternatives and actions that were considered but were not technically or economically feasible, did not meet the purpose of and need for the project, created unnecessary or excessive adverse impacts to resources, or conflicted with the overall management of the park or its resources were dismissed from detailed analysis. A number of alternatives that had been carried forward for detailed analysis in the 2011 final Plan/EIS were dismissed from analysis in the final Plan/SEIS. Reasons for dismissal of these alternatives are included in Chapter 2 of the Plan/SEIS.

Alternatives Analyzed in the Final Plan/SEIS

Alternative 1 is the no-action alternative. As of March 15, 2013, the authorization of OSV use in the interim regulation that was in effect for the 2012/2013 winter season has expired. Under the no-action alternative, the park would not take any action to promulgate a new regulation, and therefore no public OSV use would be permitted in Yellowstone. Non-motorized access and wheeled vehicle access (via the northern entrance road) into the park would continue to be permitted. The East Entrance (Sylvan Pass) would be closed during the winter season.

Under Alternative 2, snowmobile and snowcoach use would continue at levels allowed under the interim regulations in effect from December 2009 to March 2013: up to 318 snowmobiles and 78 snowcoaches per day. All OSV requirements under the 2012/2013 interim regulation would continue, including commercial guide requirements, hours of operation restrictions, and existing BAT requirements for snowmobiles. No more than 10 snowmobiles, including the snowmobile operated by the commercial guide, would be permitted per group. This is a change from the 2009–2013 interim regulations that allowed for up to 11 snowmobiles per group. BAT requirements would be implemented for snowcoaches by the 2017/2018 season. The East Entrance (Sylvan Pass) would be open for OSV travel in accordance with the Sylvan Pass Study Group recommendations.

Under Alternative 3, OSV access to the park over the long term would be via BAT snowcoaches. Alternative 3 would initially provide for both snowmobile and snowcoach access under interim regulation levels of up to 318 snowmobiles and 78 snowcoaches per day until the 2017/2018 winter season. Beginning in the 2017/2018 season, all snowcoaches would need to meet BAT requirements. Also in the 2017/2018 season, snowmobiles would begin being phased out and snowcoaches would completely replace snowmobiles within a 3-year period (by the 2020/2021 winter season). The East Entrance (Sylvan Pass) would be closed to OSV use during the winter season from the East Entrance to the Fishing Bridge Developed Area once the phase-out of snowmobiles is complete.

Under Alternative 4, the park would manage OSV use by setting a maximum number of daily transportation events allowed into the park. A transportation event is defined as one snowcoach or a group of snowmobiles (maximum group size of 10, average of 7 over the winter season). Under this alternative, the park would permit up to 110 transportation events daily, of which up to 50 daily transportation events can be groups of snowmobiles. Four of the 50 snowmobile transportation events per day (one event per gate) would be reserved for non-commercially guided snowmobile access. Each non-commercial snowmobile transportation event could contain up to five snowmobiles including the non-commercial guide and each non-commercial guide would be allowed to lead up to two non-commercially guided trips per season. The maximum trip length for a non-commercially guided snowmobile trip would be three days/two nights. All snowmobiles would be required to meet New BAT standards for air and sound emissions no later than the 2017/2018 winter season and snowcoaches would be required to meet BAT standards no later than the 2017/2018 season. If OSVs meet voluntary, enhanced environmental performance standards (referred to as "E-BAT" in the Plan/SEIS and this Record of Decision), OSV commercial tour operators would be permitted to increase their transportation event group size from one to two snowcoaches (not to exceed a seasonal average of 1.5 snowcoaches per transportation event) and from a seasonal average of seven to eight snowmobiles per transportation event (while keeping the maximum number of snowmobiles per transportation event at 10). The East Entrance (Sylvan Pass) would be open for OSV travel in accordance with the Sylvan Pass Study Group recommendation.

SELECTED ALTERNATIVE

The NPS will implement Alternative 4, management by transportation events, with several minor modifications from the version presented in the final Plan/SEIS. The Selected Alternative will be phased in over several seasons. The details of the Selected Alternative are discussed below.

Transportation Event Allocations

Under the Selected Alternative, all OSV use will be managed by transportation events, defined as one snowcoach or a group of snowmobiles (maximum group size of 10, average of 7 over the winter season). Daily allocations of transportation events by entrance are shown in Table 1. Up to 110 daily transportation events would be authorized. No more than 46 transportation events will be allocated for commercial snowmobiles and no more than 4 transportation events will be allocated for non-commercially guided snowmobiles. No less than 60 transportation events will be allocated for snowcoaches. Commercial tour operators who are allocated snowmobile transportation events may use those allocations as snowcoach transportation events, rather than snowmobile events.

The Superintendent may redistribute non-commercially guided transportation events or make limited changes to the transportation events allocated to each entrance based upon impacts to park resources, utilization rates, visitor experiences, park operations, or other factors after providing public notice.

Commercial tour operators at a given gate will be able to trade transportation event allocations within that gate, but transportation event allocations cannot not be traded between different gates (for example,

commercial tour operators at the West Entrance Gate could trade transportation event allocations among each other, but not with operators at the South Entrance Gate).

Table 1 Daily OSV Transportation Event Allocations By entrance

Entrance	Snowmobile Transportation Events		Snowcoach Transportation Events	
	Maximum Commercial Snowmobile Events	Maximum Non-commercial Snowmobile Events	Minimum Snowcoach Events	Maximum Snowcoach Events (if all transportation events allocated to commercial tour operators are used for snowcoaches)*
West Entrance	23	1	26	49
South Entrance	17	1	8	25
East Entrance	2	1	1	3
North Entrance	2	1	13	15
Old Faithful	2	0	12	14
Total	46	4	60	106

* Events allocated for commercial snowmobiles may be used as snowcoach events instead.

Phased Transition to Management by Transportation Events

The transition to management by transportation events will be phased in to provide the park and commercial tour operators sufficient time to adjust to the new management paradigm.

Phase I (2013/2014 season):

A one-season transition period to prepare for the implementation of the new winter use plan will be in place for the 2013/2014 winter season to allow time for the NPS to award concession contracts and for commercial tour operators to prepare for the shift to management by transportation events. During this transition period, provisions of the 2012/2013 interim plan will be extended, allowing up to 318 snowmobiles and 78 snowcoaches per day.

Phase II (*2014/2015 season through no later than the 2016/2017 winter season*):

Starting in the 2014/2015 winter season, the park will begin managing OSV use by transportation events instead of vehicle limits. Commercial tour operators who are allocated snowmobile transportation events will be able to use their allocated transportation events for snowmobiles, snowcoaches, or a mix of both, as long as no more than 50 total transportation events come from snowmobiles on a given day. However, during Phase II, in order to use a snowcoach in lieu of a snowmobile transportation event, the snowcoach used will need to meet the BAT requirements that will become mandatory for existing snowcoaches in Phase III. BAT requirements will apply to all new snowcoaches brought into service starting in the 2014/2015 winter season. Also starting in the 2014/2015 winter season, up to four non-commercially guided snowmobile transportation events will be allowed access to the park each day.

During Phase II, the average size of commercially guided snowmobile transportation events may not exceed 7 snowmobiles, averaged daily (resulting in a maximum of 322 commercially guided snowmobiles in the park per day; with the additional 4 non-commercially guided transportation events per

day not to exceed 5 snowmobiles each, a maximum of no more than 342 snowmobiles could enter the park each day). This average daily limit requirement will apply to any commercially guided snowmobile transportation event that includes one or more snowmobiles not meeting the New BAT requirements (see below; these are the requirements that will apply to all snowmobiles beginning in Phase III). Commercial tour operators will be allowed to have up to 10 snowmobiles per single event, provided their average daily snowmobile transportation event size is 7 snowmobiles or less. For example, a commercial tour operator that is allocated 3 snowmobile transportation events per day could meet the daily average requirement through a combination of 3 snowmobile transportation events of 7 snowmobiles each, or 2 snowmobile transportation events of 8 snowmobiles each and 1 transportation event of 5 snowmobiles.

If a snowmobile commercial tour operator voluntarily upgrades at least 10 snowmobiles to machines that meet New BAT standards during Phase II (before these standards become mandatory in Phase III) and operates those 10 snowmobiles as a single transportation event consistently throughout the winter season, the group size for that event will be averaged seasonally (rather than daily). For example, a commercial tour operator who has 10 New BAT snowmobiles and operates these snowmobiles as a single event will be able to have transportation events with a maximum of 10 New BAT snowmobiles each on multiple days throughout the season, provided the seasonal average group size for that event is seven snowmobiles or less. This incentive provides flexibility, encourages voluntary early adoption of improved vehicle technologies that meet the New BAT emission requirements, and helps ensure that impacts to park resources during Phase II are minimized.

During Phase II, if all commercial tour operators upgrade to New BAT snowmobiles, there could be a maximum of 480 snowmobiles in the park (46 commercially guided transportation events of 10 snowmobiles each, plus 4 non-commercially guided transportation events of 5 snowmobiles each) on a given day. Although this is the maximum number of snowmobiles that could be permitted into the park on a single day, this level of use could not occur every day because commercially guided snowmobile transportation event sizes may not exceed an average of 7 snowmobiles over the course of the season. The maximum daily average number of snowmobiles per day would be no higher than 342 (46 commercially guided groups of the seasonal average of 7, plus 4 non-commercially guided groups of 5 snowmobiles each).

If all snowmobiles meet the voluntary enhanced BAT (E-BAT) standards described below, then the maximum average size of snowmobile transportation events over the course of a winter season could increase from 7 to 8 snowmobiles, resulting in an average no higher than 388 snowmobiles per day (46 commercially guided groups of eight snowmobiles each, plus 4 non-commercially guided groups of 5 snowmobiles each). Under this scenario, the maximum number of snowmobiles allowed in the park would remain at 480 (46 commercially guided groups of 10 snowmobiles each, plus 4 non-commercially guided groups of 5 snowmobiles each) because group sizes will remain at a maximum of 10 snowmobiles.

Depending on whether commercial tour operators use their allocations for snowmobiles or snowcoaches, under Phase II there could be between 480 snowmobiles and 60 snowcoaches, and 20 snowmobiles and 212 snowcoaches (if all snowcoaches meet E-BAT standards) in the park on any single day.

Phase III (beginning no later than the 2017/2018 season):

No later than the 2017/2018 winter season, the Selected Alternative will be fully implemented. All OSVs, including OSVs that had been operating in the park during prior seasons, must meet the new BAT (New BAT for snowmobiles and BAT for snowcoaches) requirements or be removed from service. Up to 110 transportation events per day will be allowed, according the distribution shown in Table 1.

During Phase III, there could be a maximum of 480 snowmobiles in the park (46 commercially guided groups of 10 snowmobiles each, plus 4 non-commercially guided groups of 5 snowmobiles each) on a given day. Although this is the maximum number of snowmobiles that could be permitted into the park

on a single day, this level of use could not occur every day because commercially guided snowmobile transportation event sizes may not exceed an average of 7 snowmobiles over the course of the season. The maximum daily average number of snowmobiles per day would be no higher than 342 (46 commercially guided groups of at the seasonal average of 7, plus 4 non-commercially guided groups of 5 snowmobiles each).

If all snowmobiles meet the voluntary enhanced BAT (E-BAT) standards described below, then the maximum average size of snowmobile transportation events over the course of a winter season could increase from 7 to 8 snowmobiles, resulting in an average of no higher than 388 snowmobiles per day (46 commercially guided groups of eight snowmobiles each, plus 4 non-commercially guided groups of 5 snowmobiles each). Under this scenario, the maximum number of snowmobiles allowed in the park on a single day would remain at 480 (46 commercially guided groups of 10 snowmobiles each, plus 4 non-commercially guided groups of 5 snowmobiles each).

Depending on whether commercial tour operators use their allocations for snowmobiles or snowcoaches, under Phase III there could be between 480 snowmobiles and 60 snowcoaches, and 20 snowmobiles and 212 snowcoaches (if all snowcoaches meet E-BAT standards) in the park on any single day.

Non-commercially Guided Snowmobile Access Program

One non-commercially guided snowmobile transportation event, with up to 5 snowmobiles per group, will be allowed through each of the four entrances per day. All non-commercial snowmobile operators, including the non-commercial guide, will be required to successfully complete the Yellowstone Snowmobile Education Certification Program, which will be developed in cooperation with interested parties and stakeholders. Permits to allow non-commercially guided groups to enter the park will be awarded through an online lottery. Non-commercial guides will be limited to leading two groups per winter season in the park and each trip would be limited to a maximum of three days and two nights. Further detail on the non-commercially guided snowmobile access program is provided in Appendix C of the final Plan/SEIS.

BAT Requirements

Snowmobile BAT Requirements

The existing BAT requirements will be retained until Phase III of the Selected Alternative is implemented. Under existing BAT requirements, mandatory air emission requirements will allow no greater than 120 grams per kilowatt-hour (g/kW-hr) of carbon monoxide (CO) and 15 g/kW-hr for hydrocarbons (HC); and noise emission restrictions will continue to require snowmobiles to operate at or below 73 decibels, measured using the A-weighted scale (dBA), while following the Society of Automotive Engineers (SAE) J192 test procedures (revised 1985).

No later than December 2017, New BAT requirements for snowmobiles will become mandatory. Air emission requirements will allow no greater than 90 g/kW-hr of CO and 15 g/kW-hr of hydrocarbons. Noise emission requirements will allow a maximum of 67 dBA, under SAE J1161 test procedures, with snowmobiles being tested at the park's maximum allowed speed limit of 35 mph. The SAE J1161 test procedures allow for a tolerance of 2 dBA over the noise level limit to provide for variations in test sites, temperature gradients, wind velocity gradients, test equipment, and inherent differences in nominally identical vehicles. This means that in order for a snowmobile to be certified for New BAT for noise emission, a sample of noise emission measurements for a specific snowmobile make and model may not exceed a mean (average) noise output of 67 dBA and no single measurement from the sample may exceed 69 dBA as measured following the J1161 test procedures at 35 mph.

The adoption of the SAE J1161 testing procedure for measuring snowmobile noise output represents a change from the way snowmobile noise was tested in the past. Under previous winter use plans and BAT snowmobile test procedures, the SAE J192 standard was used. The SAE J192 test represents a full-throttle

test designed to measure the maximum noise output of a snowmobile and was not representative of how snowmobiles are operated in Yellowstone. The NPS will now require the SAE J1161 test prescription which requires testing vehicles at typical cruising speed in order to better represent how snowmobiles are operated in Yellowstone. Testing and certifying snowmobiles via the SAE J1161 test at their typical cruising speed will result in more reliable data regarding the impacts of snowmobiles on park soundscapes. Because snowcoaches are tested at cruising speed, results of the SAE J1161 test will also allow a more valid and reliable comparison of impacts to soundscapes from snowmobiles versus snowcoaches, which will also be tested at their maximum allowed speed. BAT certification for a snowmobile will be effective for six consecutive winter seasons following its manufacture or until the snowmobile travels 6,000 miles, whichever occurs later.

Voluntary Enhanced-BAT (E-BAT) for Snowmobiles

Starting in the 2014/2015 season, if all snowmobiles in a transportation event meet voluntary E-BAT standards (described below), transportation event group size for snowmobiles could increase from a seasonal average of no more than seven snowmobiles per transportation event to a seasonal average of no more than eight snowmobiles per transportation event. In that case, average maximum daily use could be 388 snowmobiles per day, of which 368 would be from commercially guided snowmobiles. Maximum group size will remain no more than 10 snowmobiles.

- For tailpipe emissions, E-BAT will allow no greater than 60 g/kW-hr of CO and 15 g/kW-hr of hydrocarbons.
- For sound emissions, E-BAT will allow no greater than a maximum of 65 dBA (2 dBA less than the new BAT standard of 67 dBA via SAE J192) as measured using the SAE J1161 process described above.

Snowcoach BAT Requirements

BAT standards will be required for all snowcoaches no later than the 2017/2018 season. In addition, all new snowcoaches entering service beginning in the 2014/2015 season will need to meet the BAT requirements at the time they enter service. Furthermore, during Phase II of implementation, if a commercial tour operator wishes to operate a snowcoach in place of a snowmobile transportation event, that snowcoach will need to meet BAT requirements.

Specific BAT requirements will include the following, which is further described in Appendix B of the Plan/SEIS:

- Snowcoach BAT will require that snowcoach sound emissions measure 75 dBA or less, at 25 mph or its maximum cruising speed if a snowcoach cannot reach 25 mph, as measured according to Society of Automotive Engineers J1161 test procedures. Yellowstone staff will conduct noise emission testing on all snowcoaches proposed for use in the park.
- BAT for air emissions is defined as the vehicle being 2007 or 2008 (depending on the GVWR) or newer for gasoline engines and 2010 or newer for diesel engines (the equivalent of EPA Tier 2 model year engine and emission control technology requirements).
- The NPS will test and approve all snowcoaches for operation in Yellowstone National Park and the Superintendent will maintain a list of all approved snowcoaches that meet the air and noise emissions requirements. Once approved, a snowcoach may operate in the park through the winter season that begins no more than 10 years following its engine manufacture date. To continue to operate in the park during future winter seasons beyond those 10 years, a snowcoach must be retrofitted with a new engine and emissions equipment, and re-certified for air and noise emissions. For example, a snowcoach with a model year 2010 engine could operate through the 2020/2021 winter season and will cease to be allowed to operate in the park as of March 15, 2021, if it is not retrofitted with a new engine and emissions control equipment and re-certified.

Individual snowcoaches may be subject to periodic and random inspections to determine compliance with BAT requirements. The NPS may make future changes to BAT requirements through the adaptive management process, including the possibility of adopting a performance or quasi-technical/performance-based air emission standard. Such a change could allow snowcoaches to be operated in the park after the expiration of the 10-year certification period but may require additional NEPA review prior to implementation.

Voluntary Enhanced-BAT (E-BAT) for Snowcoaches

Starting in the 2014/2015 winter season, the maximum number of snowcoaches per transportation event could rise from 1 to 2 (not to exceed a seasonal average of 1.5 per transportation event) if both snowcoaches meet voluntary E-BAT standards, defined as meeting EPA Tier 2 engine and emission requirements for air quality, and for sound, defined as emitting no more than 71 dBA at 25 mph or maximum cruising speed if a snowcoach cannot reach 25 mph, as measured via the SAE J1161 test procedures (4 dBA less than the 75 BAT standard). To be considered a single transportation event, the two snowcoaches will be required to travel together closely, keeping a safe distance between them.

OSV Routes

OSV use will be allowed only on designated routes, which are groomed roads that normally provide wheeled vehicle access in the summer. These winter use roads are listed below. No off-road or off-route OSV use will be permitted. The following routes will be open for OSV use:

- Entrance roads; from the parking lot at Upper Terrace Drive south of Mammoth Hot Springs to Norris Junction, from the park boundary at West Yellowstone to Madison Junction, from the South Entrance to West Thumb, and from the East Entrance to junction with the Grand Loop Road.
- Grand Loop Road segments; from Norris Junction to Madison Junction, from Madison Junction to West Thumb, from West Thumb to the junction with the East Entrance Road, from Norris Junction to Canyon Junction, and from Canyon Junction to the junction with the East Entrance Road.
- Side roads; South Canyon Rim Drive, Lake Butte Road, Firehole Canyon Drive, North Canyon Rim Drive, and Riverside Drive.
- Developed area roads in the areas of Madison Junction, Old Faithful, Grant Village, West Thumb, Lake, East Entrance, Fishing Bridge, Canyon, Indian Creek, and Norris.
- The following routes will be open to snowcoach use only:
  - Roads in the developed area of Mammoth Hot Springs (rubber-tracked coaches only)
  - Canyon Junction to the Washburn Hot Springs Overlook.

The snowmobile route to Cave Falls will continue to operate. This route terminates approximately one mile into the park at Cave Falls (a dead end). Up to 50 snowmobiles could enter this area per day; snowmobiles accessing this area will be exempt from commercial guiding and BAT requirements because the 1-mile, dead-end route does not connect to other snow roads in the park. The snowmobiles traveling on the Cave Falls route will be allowed in addition to the 110 transportation events allowed each day.

The Superintendent may open or close all designated oversnow routes, or portions thereof, in consideration of the location of wintering wildlife, adequate snowpack, public safety, resource protection, park operations, use patterns, adaptive management needs, and other factors.

Plowed Roads / Wheeled Vehicle Management

The following roads will continue to be plowed and private wheeled vehicles will be permitted:

- North Entrance to the parking lot at Upper Terrace Drive
- Mammoth Hot Springs to the Northeast Entrance
- Roads in the developed areas at Mammoth Hot Springs, Tower Ranger Station, Lamar Ranger Station, Northeast Entrance, and Gardiner

Sand, or an equally environmentally neutral substance, may be used for traction on all plowed winter roads. No salt will be used and sand will be generally spread only in the shaded, icy, or hilly areas of plowed roads. Before spring opening, sand removal operations will be conducted on all plowed park roads.

Non-motorized Access

Non-motorized uses include cross-country skiing, backcountry skiing, hiking, and snowshoeing. Where feasible, the park will continue to set tracks for skiing on snow road edges. Backcountry non-motorized use will continue to be allowed in most of the park subject to the Winter Severity Index program. The program restricts backcountry use of the park when winter snowpack and weather conditions become severe and appear to be adversely affecting wildlife.

Ski and snowshoe use at the South and East Entrances will be allowed to continue after roads close to motorized winter use (to allow for spring plowing). When spring plowing operations approach entrances, the roads will be closed for safety.

Bear management closures of the park's backcountry will continue as in previous years, preventing non-motorized use in these areas. Sensitive areas in the inner gorge of the Grand Canyon of the Yellowstone and the McMinn Bench bighorn sheep area will continue to be closed to recreational winter use to provide for protection of sensitive resources.

Approximately 35 miles of road will continue to be groomed for cross-country skiing in the park. These roads are mainly used during the summer, and are closed to OSV use. The roads may be machine groomed for skiing. Existing and new routes could be evaluated in the future, and changes announced through one or more of the methods listed in 36 CFR 1.7(a). Existing groomed areas for cross-country skiing include the following:

- Bunsen Peak Trail: 6 miles
- Indian Creek Loop: 2.2 miles
- Upper Terrace Loop Trail: 1.5 miles
- Old Canyon Bridge Trail: 1 mile
- Lone Star Geyser Trail: 2 miles
- Practice Ovals: 0.3 mile
- Cloverleaf: 0.8 mile
- Cabin Track: 0.4 mile
- East Road Track: 0.9 mile
- Morning Glory Trail: 3 miles
- Blacktail Plateau Trail: 8 miles
- Tower Falls Trail: 2.5 miles
- Chittenden Loop Trail: 5.3 miles
- Riverside Trail: 1 mile

Dates and Hours of Operation

Under the Selected Alternative, the park will open for the winter season each year no earlier than December 15 and will remain open through no later than March 15, as conditions allow.

Early closures of the Grand Loop Road, from its junction with Upper Terrace Drive to Madison Junction and from Norris Junction to Canyon and Fishing Bridge Junction, will occur to facilitate spring plowing. To protect road surfaces, the NPS will continue to implement temporary vehicle type restrictions (for example, rubber-tracked vehicles only), as necessary.

Hours of operation for OSV use will be between 7:00 a.m. and 9:00 p.m. Early and late entries (before 7:00 a.m. or after 9:00 p.m.) will not be permitted, including departures from Snow Lodge. Limited exceptions will be allowed for administrative travel and emergencies.

In accordance with the Sylvan Pass Study Group recommendations, the East Entrance will be open no earlier than December 22 and will close no later than March 1, and daily hours of operation will be between the hours of 8:00 a.m. and 9:00 p.m., as snow and safety conditions allow.

Sylvan Pass Avalanche Control

Sylvan Pass will be open for OSV travel, as conditions allow. A combination of avalanche mitigation techniques may be used, including forecasting and use of explosives. The results of the most recent safety evaluation of Sylvan Pass by the Occupational Safety and Health Administration (OSHA) and an Operational Risk Management Assessment (ORMA) will be reviewed periodically and the NPS will evaluate additional avalanche mitigation techniques and risk assessment tools to further improve safety and visitor access.

Personal Protective Equipment

Personal protective equipment is recommended for snowmobilers, including helmet, snowmobile suit and gloves, proper footwear, and hearing protection. People traveling by snowcoach should also wear or have access to appropriate personal protective equipment including winter clothing, footwear, and hearing protection. Non-motorized users are advised to wear and carry personal protective equipment as appropriate for their winter travel. For all user groups, personal protective equipment including avalanche rescue gear (shovel, probe, and transceiver) is encouraged, but not required.

Licensing and Registration

All OSV operators must possess and carry a valid state-issued motor vehicle driver's license at all times. A learner's permit does not satisfy this requirement. This includes non-commercial snowmobile guides and operators. All snowmobiles and snowcoaches must be properly registered in the State or Province of principal use and display a valid registration.

Speed Limits

The maximum speed allowed for snowmobiles will be 35 mph. Speed limits could be lower in more congested areas or in wildlife sensitive corridors, for example, between West Yellowstone and Old Faithful. In developed areas, the speed limit will be as posted, but no faster than 25 mph. In all cases, the maximum speed allowed for snowcoaches will be 25 mph.

Administrative Use

Non-recreational administrative use of snowmobiles will be allowed for personnel of the NPS and its agents. These personnel must use snowmobiles that meet the BAT requirements in place at the time they enter the Park, unless specifically otherwise authorized by the park Superintendent. Such use will not be subject to guiding requirements. Some snowmobiles that do not meet BAT requirements will be permitted for law enforcement, search and rescue, and other administrative purposes on a limited basis. The use of non-BAT snowmobiles to access power and telephone systems and to conduct boundary patrols will be granted on a limited basis. All administrative use snowmobiles may be used for up to six model years or

6,000 miles, whichever is later. Administrative use of snowmobiles may be supplemented with administrative snowcoaches.

Non-administrative OSV Use by Employees and Contractors

Travel by NPS employees during off-duty hours, their families, and their guests; by concession employees during off-duty hours, their families, and their guests; and other persons designated by the Superintendent, will be allowed only on groomed roads that meet safety criteria and that are identified as open for travel. Non-administrative OSV use of this sort will be exempt from commercial guiding and hours of operation requirements, and will be allowed in addition to the 110 transportation events allowed each day. Individuals covered under this section must use snowmobiles that meet the BAT requirements in place at the time they enter the park, unless specifically otherwise authorized by the park Superintendent.

Accessibility

The NPS will continue to make reasonable efforts to ensure accessibility to buildings, facilities, programs, and services. The NPS will develop strategies to ensure that new and renovated facilities, programs, and services (including those provided by concessioners) are designed, constructed, or offered in conformance with applicable policies, rules, regulations, and standards, including but not limited to the Architectural Barriers Act of 1968, the Americans with Disabilities Act of 1990 (ADA), the Rehabilitation Act of 1973, the Uniform Federal Accessibility Standards of 1984, and the Guidelines for Outdoor Developed Areas of 1999. The NPS will evaluate existing and new programs, buildings, activities, and services, including telecommunications and media, to determine current accessibility and usability by disabled winter visitors.

Facilities

Warming huts may be available for visitor use at West Thumb, Old Faithful, Madison, Norris, Canyon, Fishing Bridge, Indian Creek, Mammoth Terraces, and other appropriate sites.

Emergency Actions

The Superintendent will continue to have the authority to take emergency actions to protect park resources or values.

Adaptive Management

Adaptive management allows decision-makers to acknowledge the uncertainties surrounding the management of natural systems and helps natural resource managers respond to changing resource or system conditions over time through the collection and evaluation of additional social and ecological information. The knowledge that uncertainties exist gives managers the ability to consider them in their planning and to modify management actions accordingly to progress towards desired outcomes. Adaptive management has the potential to improve a manager's understanding of social and ecological systems to better achieve management objectives.

The focus of Yellowstone National Park's winter use adaptive management and monitoring program is on learning, with the ultimate goal of the effort to continuously improve management. The collaborative adaptive management and monitoring process described below includes an initial outreach phase in the fall of 2013, during which the NPS will work with stakeholders in developing a long-term sustainable adaptive management plan for winter use management in Yellowstone National Park. The NPS is committed to fully implementing the adaptive management and monitoring strategy described below, and will seek funding to do so. However, full implementation is subject to the availability of funds.

The NPS has identified three main objectives for long-term adaptive management of winter use:

1. To evaluate the impacts of OSV use and help managers implement actions that keep impacts within the range predicted under the Selected Alternative.
2. To gather additional data regarding the comparability of impacts from a group of snowmobiles versus a snowcoach.
3. To reduce impacts on park resources after implementation of the Selected Alternative, by gathering additional data regarding the overall social and ecological impacts of winter use and using those data to guide future management decisions.

Initial Monitoring

The NPS recognizes that there are still uncertainties surrounding how resources will respond to OSV use management and how the visitor experience may be affected. The NPS notes that opportunities remain to improve management in a manner that considers visitor experience and seeks to reduce environmental impacts and improve environmental quality. Table 2 below identifies some of the affected resources, indicators, and monitoring methods that may be used to collect baseline, or pre-project, data during the first two seasons of implementation (the transition year between the use levels allowed for the past four seasons and implementation of the new transportation event management framework, and the first year of implementation of transportation event management). Before this initial approach is implemented, the park will convene meetings with stakeholders to begin development of a long-term stakeholder-informed adaptive management plan for winter use in Yellowstone National Park. The approach for developing the long-term plan is described below.

Table 2 outlines an example monitoring framework that may be implemented during the 2013/2014 and 2014/2015 seasons. Several affected resources are identified, as well as potential indicators that will be used to assess changes in those resources. Information collected during these seasons, in combination with data collected over the previous four seasons, which allowed use at the 2009-2013 Interim Regulation levels, will allow a baseline to be established and can be used to help refine monitoring methods for the long-term plan by providing an understanding of natural variability and changes in visitor experience from 2009-2015.

TABLE 2 EXAMPLES OF ADAPTIVE MANAGEMENT MONITORING: AFFECTED RESOURCE, INDICATOR, AND MONITORING METHOD IDENTIFICATION

Affected Resource	Potential Indicators	Potential Monitoring Methods
Air Quality	Levels of: CO, PM_{10}, and NO_2	Fixed site monitoring for CO, PM_{10}, and NO_2
Soundscapes	Audibility: decibel levels (dBA) in terms of magnitude and duration (constant sound level or L_{eq}).	Could include audibility logging, digital recordings, and sound pressure level measurement
Visitor Experience	Visitor satisfaction	Visitor survey (pending OMB approval)
Wildlife on or Near Roads	Wildlife behavioral responses to OSV use	Observational studies
Health and Safety of OSV Travelers	Number and severity of reported incidents	Incident reports regarding OSV use

Future Long-term Adaptive Management Strategy

The NPS will facilitate a focused inclusive process for developing the winter use adaptive management and monitoring plan, and will work with all relevant stakeholders to refine a set of indicators to guide future winter use monitoring and management. As part of this process, stakeholders and the public will be engaged to ensure the park fully understands key issues and concerns and to assist with the development of a suite of appropriate monitoring metrics and methods to assess the condition of key affected resources

and reduce key uncertainties. Although there is often a desire to monitor many resource indicators, the adaptive management plan will focus on a prioritized set of key indicators that will enable the NPS to address important uncertainties and, as a result, improve winter use management. The NPS is committed to implementing this adaptive management strategy, and has hired a staff member, stationed at the park, to oversee development and initial implementation of the long-term adaptive management strategy.

Based on the results of the initial outreach phase, a monitoring plan will be developed to evaluate the conditions of identified affected resources using specific metrics and methods. The results from monitoring this priority set of indicators will be analyzed on an annual basis and shared with the public regularly. Based on the results, the NPS may adjust winter use management in order to better protect park resources and improve visitor experiences. Monitoring results may also suggest that other metrics need to be evaluated, or alterations to the way resources are monitored should be made. If such situations arise, the NPS will seek additional stakeholder input regarding monitoring methods and metrics.

The NPS intends to convene interested stakeholders during the fall of 2013, present a draft adaptive management plan and a set of pilot projects to develop/refine sampling protocols in the spring or summer of 2014, and implement a preliminary final adaptive management plan no later than the winter of 2015/2016. All interested parties will be encouraged to participate in the adaptive management process. Upon completion of the long-term adaptive management plan, the park will hold regularly scheduled stakeholder meetings to discuss data and findings, and obtain feedback from stakeholders on NPS recommendations. The NPS will also develop a website to serve as an information portal for the winter use adaptive management and monitoring program.

Future Adaptive Management Actions

The results of resource monitoring may influence future changes in management. As park resources respond to OSV use levels and associated impacts, the NPS may find it advisable or necessary to reduce OSV use levels or the manner in which OSVs are managed (such as locations, timing, guiding requirements, non-commercial guiding, temporal spacing, etc.). These potential decisions will be based on the monitoring data and on specific adaptive management decision-making triggers. While the park may take any of the actions listed below in response to the monitoring data collected, the park could not, under any scenario, authorize more than 110 transportation events (the maximum number of events evaluated under the Selected Alternative) through adaptive management.

As noted above, the NPS has identified three main objectives for long-term adaptive management. For objectives 2 and 3—continuing to assess the comparability of impacts from a group of snowmobiles versus a snowcoach and continuing to improve the condition of park resources—the NPS will have discretion as to when changes to management are undertaken. However, for the first objective—evaluating impacts and implementing actions to keep them within the range predicted under the Selected Alternative—a change to management will be made if monitoring indicates an impact has exceeded the intensity level (minor, moderate, major) predicted in the final Plan/SEIS. For example, if the final Plan/SEIS predicts that OSV use would have a moderate effect on a given resource (as defined by the intensity definition), and monitoring data indicate that the effects are major (as defined by the intensity definition), the park will act to adjust OSV management so that the impacts are reduced to a moderate intensity. Furthermore, for impacts to soundscapes and air quality, where there are quantitative modeling data, the NPS will strive to keep actual levels at or below the specific quantitative levels predicted under the Selected Alternative. The NPS notes that for the Selected Alternative, all impacts have been assessed at the minor intensity level, except for impacts to wildlife, which are expected to be moderate, and air quality, where nitrogen dioxide (NO_2) emissions are expected to be of a moderate intensity. As described in the final Plan/SEIS, no major adverse impacts are predicted under the Selected Alternative.

Potential future adaptive management actions could include:

- Requiring lower-emission (noise or air) technologies for OSVs;
- Reducing the numbers of daily OSV transportation events permitted;
- Reducing the average or maximum number of OSVs per transportation event;
- Adjusting the ratio of snowcoach and snowmobile transportation events (however, no more than 50 transportation events will be allocated to snowmobiles under any scenario);
- Redistributing transportation events between entrance gates (including Old Faithful);
- Establishing timed-entry requirements or staging at the entrance gates for OSVs;
- Adjusting speed limits;
- Adjusting OSV entry protocols at entrance stations, including reducing or eliminating idle times;
- Phasing-out the use of specific technologies or models, which could include size and/or weight limits for snowcoaches;
- Adopting a performance or quasi-technical/performance-based BAT specification for snowcoaches;
- Increasing recreational and educational opportunities for visitors;
- Decreasing transportation event allowances for non-commercially guided access or discontinuing the non-commercially guided snowmobile access program entirely;
- Closing certain OSV areas, routes, or entrances; and
- Modifying the time periods during which OSVs are allowed to be used on certain segments of roads.

Many of the management actions listed above have been described and their potential impacts have been analyzed in the Plan/SEIS and previous NEPA documents that have been incorporated by reference. Therefore, only a streamlined environmental review may be necessary if the NPS determines it is necessary to adjust its management in the future.

Potential for Additional NEPA Review

Once it is determined that a potential future management action is necessary or desirable to better achieve adaptive management objectives, an initial environmental screening process will be conducted to determine what, if any, additional environmental compliance may be required. Through this screening process, the NPS will document whether adaptive management adjustments, both individually and cumulatively, are (1) within the range of management actions described for the Selected Alternative, and (2) fully analyzed in the environmental effects section of the Plan/SEIS or previous NEPA documents incorporated by reference. The following questions will be used to evaluate if the Plan/SEIS or previous NEPA documents incorporated by reference have adequately analyzed impacts for proposed adjustments to winter use management:

- Is the change to the Selected Alternative in the ROD a feature of, or essentially similar to, an action or alternative analyzed in the existing NEPA documents? Is the action within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA documents? If there are differences, are they substantial?

- Is the range of alternatives analyzed in the Plan/SEIS or previous NEPA documents incorporated by reference appropriate with respect to the new proposed actions, given current environmental concerns, interests, and resource values?
- Is the existing analysis valid in light of any new information or circumstances? Can it be concluded that new information and new circumstances would not be significant as they relate to environmental concerns?
- Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed actions similar (both quantitatively and qualitatively) to those analyzed in the Plan/SEIS or previous NEPA documents incorporated by reference?
- Does the proposed action alter the conclusions of the non-impairment determination accompanying the Record of Decision?

Some management changes could be implemented quickly, as they would be within the scope of the Selected Alternative and their impacts will have been adequately assessed. However, other actions may require additional environmental review and/or rulemaking.

In addition to the stakeholder involvement as part of the adaptive management framework, the appropriate level of public and stakeholder involvement and notification would occur based on the level of environmental analysis required.

CHANGES TO THE SELECTED ALTERNATIVE

As noted above, the NPS made several changes to the Selected Alternative between the release of the final Plan/SEIS on February 22, 2013, and the date this ROD was signed, based on input from NPS personnel, cooperating agencies, and public comments received during the planning process. These changes are detailed below. Only changes 1 and 2 (described below), resulted in different environmental impacts than were disclosed in the final Plan/SEIS.

Change 1: The NPS made a change to the number of transportation events allocated to each entrance, which resulted in slightly different quantitative modeling results for air quality and soundscapes only. However, the overall intensity level (minor, moderate, major) of impacts to air quality and soundscapes remains the same as disclosed in the final Plan/SEIS. The revised modeling results are included in Attachment A to this ROD. This change was made in order to more accurately reflect the number of transportation events that will be used at each entrance once the Selected Alternative is fully implemented.

Change 2: The NPS made a change to the seasonal average of E-BAT snowcoaches in its modeling assumptions. While meeting E-BAT standards will allow operators to have two snowcoaches per event on any given day, the seasonal average for daily E-BAT snowcoach use can be no greater than 1.5 snowcoaches per transportation event. This condition was included in the final Plan/SEIS, but the modeling in the final Plan/SEIS was conducted for 2 snowcoaches per event over the season, rather than 1.5. This change lessens the total tons per year of pollutants emitted from snowcoaches under the scenario given for Alternative 4D in the final Plan/SEIS. The revised numbers are included in Attachment A to this ROD.

Change 3: The NPS made a change to clarify that the maximum speed limit for snowmobiles will be 35 mph and the maximum speed limit for snowcoaches will be 25 mph. A resulting clarification is that snowmobiles will be required to be tested at 35 mph and snowcoaches will be tested at 25 mph or their maximum cruising speed if they cannot reach 25 mph, in order to be certified as BAT compliant. This is consistent with how these vehicles were modeled for the final Plan/SEIS and therefore these clarifications do not result in any changes to the environmental impacts, as disclosed in the final Plan/SEIS.

Change 4: The NPS modified the adaptive management strategy to state that the NPS will not increase the number of non-commercially guided transportation events through the adaptive management process. The final Plan/SEIS stated that this could be a possibility. After further deliberations, the NPS has decided not to pursue this option. No changes to the impact analysis of the Selected Alternative, as disclosed in the final Plan/SEIS, will occur as a result of this change.

Change 5: The NPS made a change to clarify that during Phase II of implementation, for a snowmobile transportation event to be used as a snowcoach transportation event, the snowcoach used must be BAT-compliant. This clarification will ensure that impacts to park resources remain within the range predicted in the final Plan/SEIS. No changes to the impact analysis of the Selected Alternative, as disclosed in the final Plan/SEIS, will occur as a result of this change.

Change 6: The NPS added text to clarify that the roads in the developed area of Mammoth Hot Springs and the Grand Loop Road from Canyon Junction to the Washburn Hot Springs Overlook will be open to snowcoaches only. No changes to the impact analysis of the Selected Alternative, as disclosed in the final Plan/SEIS, will occur as a result of this change.

Change 7: The NPS made a change to allow development of a performance or quasi-technical/performance-based BAT specification for snowcoaches in order to allow snowcoaches to operate past their 10-year certification period. The NPS notes that additional NEPA review may be required prior to implementation, but at this time no changes to the impact analysis of the Selected Alternative, as disclosed in the final Plan/SEIS, will occur as a result of this change.

Change 8: The NPS made a change to allow non-commercially guided trips to stay in the park for up to three days and two nights, as opposed to two days and one night. No changes to the impact analysis of the Selected Alternative, as disclosed in the final Plan/SEIS, will occur as a result of this change.

Change 9: In the definition of "snowcoach," the NPS removed the requirement that snowcoaches be driven by a track or tracks and steered by skis or tracks. The NPS notes that additional NEPA review may be required prior to allowing snowcoaches that use wheels rather than tracks, but at this time no changes to the impact analysis of the Selected Alternative, as disclosed in the final Plan/SEIS, will occur as a result of this change.

MEASURES TO MINIMIZE ENVIRONMENTAL HARM

Monitoring and Mitigation

Monitoring resources during the implementation of the Selected Alternative will be important in order to allow the NPS to continue to understand resource responses to OSV use. The monitoring efforts that will be undertaken during the initial implementation of the Selected Alternative are described above under the "Adaptive Management" heading, and will allow the park to respond quickly to minimize impacts to resources, if necessary. Management actions that the park could take based on monitoring information are also discussed above under the "Adaptive Management" heading. Should monitoring during any winter season indicate resource concerns, the Superintendent continues to have the regulatory authority outside of the adaptive management process to take emergency actions to protect park resources and values.

Best Available Technology

The purpose of requiring BAT under the Selected Alternative is to ensure impacts to park resources from OSV use are minimized. All OSVs entering the park will need to meet BAT standards for air and noise emissions, as described under the "Selected Alternative" heading above, except for snowmobiles originating on the Cave Falls Road. Individual snowcoaches and snowmobiles may be subject to periodic inspections to determine compliance with BAT requirements. Snowmobiles and snowcoaches that have

been modified in a manner that may affect their air or sound emissions may be prohibited from entering the park by the Superintendent.

The Superintendent will maintain a list of approved snowmobile makes, models, and years of manufacture that meet the BAT and New BAT requirements. The list will be posted on the park website, and notice will be provided by one or more of the methods listed in 36 CFR 1.7(a). Once approved, a snowmobile will be certified as BAT or New BAT for a period of six years or 6,000 miles, whichever is later. However, snowmobiles certified during phases I and II cannot be used during phase III unless they meet the New BAT standards.

The Superintendent will also test, certify, and maintain a list of BAT-compliant snowcoaches. Once approved, a BAT snowcoach may operate in the park through the winter season that begins no more than 10 years following its engine manufacture date, unless a performance-based or quasi-technical/performance-based air emission standard is developed in the future. Modifying or disabling original pollution control equipment will be prohibited, except for maintenance purposes.

For all OSVs, all emission, sound, on-board diagnostic, and odometer-related components originally installed by the manufacturer must be in place and functioning properly. Any malfunctioning component must be replaced with the original equipment manufacturer (OEM) component where possible. If new or functional used OEM parts are not available, aftermarket parts may be used if they do not worsen noise or air emission characteristics.

The NPS recommends the use of environmentally preferred fuels and lubricants for all motorized winter vehicle use. For example, this could include lubricants meeting the EPA "highly biodegradable" classification, and fuels like biodiesel and ethanol blends. Additionally, the NPS encourages the use of fuel-efficient winter vehicles in the park.

Wildlife, Including Federally Protected Species and Species of Special Concern

- Speed limits for oversnow vehicles will continue to be enforced to minimize noise and wildlife disturbance, and to prevent wildlife strikes by OSVs.
- To reduce adverse interactions with wildlife along roads, all OSV use will be 100% guided.
- At periodic intervals when snow depth warrants, routine plowing or grooming operations will include laying back roadside snow banks that could be a barrier to wildlife exiting the road corridor.
- NPS personnel will patrol sensitive resource areas to ensure compliance with area closures.
- The park will continue to support the objectives of the Greater Yellowstone Bald Eagle Management Plan, and the eagle population will continue to be monitored to identify and protect nests.
- Monitoring of wolves will continue.
- Monitoring of grizzly bear populations will continue in accordance with the Interagency Grizzly Bear Management Guidelines and the park's bear management plans.
- Wildlife-proof garbage holding facilities for interior locations (including the Old Faithful Snowlodge) will be provided as part of regularly-occurring park operations.
- Use of groomed, ungroomed, and plowed surfaces by bison and other ungulates will continue to be monitored.

- Monitoring and protection of trumpeter swan habitats and nests will continue, including the closure of nest sites to public access when warranted.
- Monitoring potential or known winter use conflicts will result in area closures if necessary to protect wildlife and their habitat.
- If monitoring indicates that undesirable impacts are occurring, further measures including avoiding, minimizing, rectifying, reducing, or compensating for those impacts will be identified and taken.

Air Quality

- Air quality monitoring will continue. Monitoring of pollution deposition in the snowpack may also continue.

Soundscapes

- Soundscape monitoring will continue, including, short-term soundscape monitoring at several locations around the park to continue to gather information from a variety of sites and from various OSVs.

Cultural Resources

- If human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered, applicable provisions of the Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. § 3001 et seq.) will be followed.

Water Resources

- Best management practices will be used during the construction, reconstruction, or winter plowing of trails and roads to prevent unnecessary vegetation removal, erosion, and sedimentation.
- Water resource monitoring, which has not indicated a problem in recent years, will continue on an as-needed basis. If necessary, best management practices will be implemented

BASIS FOR DECISION

The NPS believes that visitor access to Yellowstone in the winter is appropriate and that due to the size of the park and the harsh winter weather conditions, some level of motorized oversnow access is also appropriate. When properly managed, as demonstrated in the final Plan/SEIS, OSV use, including the use of snowmobiles, can be allowed while at the same time ensuring that adverse impacts to park resources and values are minimized. Implementation of the Selected Alternative is consistent with NPS Management Policies which call for adverse impacts on park resources and values to be minimized, and with the desire of the NPS to avoid major adverse impacts to the park's resources as a result of motorized OSV travel.

In making this decision, the NPS considered a number of factors, including the information in the draft Plan/SEIS (which included consideration of recent conditions in the park during winter, the impact analysis of each of the alternatives, the adaptive management strategy and the Comparability Assessment of Snowmobile and Snowcoach Transportation Event Impacts to Park Resources and Values and the Visitor Experience); public comments received during the planning process; the degree to which the Selected Alternative meets the objectives of the final Plan/SEIS and resolves the purpose and need for taking action; economic and technical considerations; the sustainability of the decision; and other factors.

The NPS notes that many commenters indicated that the NPS should cap OSV use at the average use levels seen in recent years under the interim regulations (average of approximately 190 snowmobiles and 36 snowcoaches daily). The NPS did consider, but dismiss from detailed analysis, an alternative that would have capped OSV use at these levels. While there are likely a number of factors that resulted in less than 100 percent of the authorized use being seen over the past few seasons, for its impact analysis, the NPS has assumed that 100 percent of the allowable OSV use will take place under each alternative analyzed. Under its NEPA analysis obligations, the NPS must disclose the level of environmental impact that could occur as a result of implementing any of the alternatives considered in the final Plan/SEIS, not the level of use that is actually expected. Therefore, in evaluating the four alternatives in the Plan/SEIS, the NPS evaluated the impacts of each alternative at 100 percent of the authorized use. The NPS further notes, however, that at the same levels of average use seen under the interim regulations, the new BAT standards and transportation event management mandated under the Selected Alternative would result in fewer OSV impacts than have been observed in the park over the past four seasons.

The Selected Alternative was chosen for implementation because it:

- Allows the park to best fulfill its mission of conserving and protecting the resources and values of the park while providing for appropriate visitor use;
- Has the potential to make the park cleaner and quieter than previously authorized under any past winter use plan, including the interim regulations that were in place from the 2009/2010 through 2012/2013 winter seasons;
- Would result in fewer adverse impacts to park resources and values than the other action alternatives;
- Is impact-centric, rather than vehicle number-centric, and is therefore better aligned with the science of winter use than previous winter use management plans and the other alternatives that were considered in the final Plan/SEIS;
    - Rather than focusing on numbers of OSVs allowed in the park, managing by transportation events focuses on the impacts to resources that result from OSV use and recognizes that wildlife, natural soundscapes, and park visitors are affected primarily by groups of vehicles (what the NPS has termed "transportation events"), rather than individual vehicles within a discrete group.
    - By grouping OSVs into discrete transportation events and limiting the maximum number of transportation events allowed each day in the park, the NPS will be able to minimize impacts to wildlife and increase the time that natural sounds predominate in the wintertime landscape.
- Promotes advances in OSV innovations and technologies by implementing BAT standards for snowcoaches and New BAT standards for snowmobiles, and offers voluntary E-BAT standards for both snowmobiles and snowcoaches that, if met, would allow for increases in commercial visitation;
- Commits to a stakeholder-involved adaptive management planning process that will help evaluate impacts and implement actions to keep impacts within the range predicted under the Selected Alternative; will ensure that no major adverse impacts result to park resources from OSV use over the long-term; and will allow the NPS to reduce impacts to park resources after implementation of the Selected Alternative by gathering additional data regarding the overall impacts of winter use and using those data to guide future management decisions;
- Allows snowmobile and snowcoach use to continue, which allows for a variety of visitor experiences rather than limiting visitors to one mode of transportation;

- Provides flexibility for commercial tour operators by allowing them to respond to fluctuations in market demand, since they will be able to decide whether to use their allocation of transportation events on snowmobiles or snowcoaches within the parameters described in this Record of Decision;
- Allows for further increases in public visitation if OSVs meet voluntary E-BAT standards; and
- Allows 4 snowmobile transportation events per day to be led through the park by a non-commercial guide.

The Selected Alternative meets the objectives of the Plan/SEIS in a manner that has the same or fewer impacts to most park resources than the other action alternatives. The NPS determined through the impact analysis in the Plan/SEIS, that all impacts to all resources under the Selected Alternative, except for air quality (1-hour NO_2 standard at one site) and wildlife (where all action alternatives are predicted to be moderate), will be minor in intensity.

For air quality, impacts resulting from CO emissions are determined to be minor in intensity, and the Selected Alternative would emit the lowest amount of hydrocarbons of any of the alternative alternatives. The NPS notes that the maximum predicted 1-hour NO_2 concentration levels are predicted to be moderate in intensity. The Environmental Protection Agency recently promulgated a 1-hour NO_2 standard, and NO_2 data has just begun to be collected at the park. Monitoring data from the past two seasons indicates that the average daily level of NO_2 in the park has been 11.8 ppb (one-hour standard), which is approximately 12 percent of the 1-hour National Ambient Air Quality Standard. The NPS will continue to monitor air quality through the adaptive management program, and if necessary, will address ways to limit NO_2 emissions through the adaptive management process. For wildlife, the NPS notes that under all action alternatives, impacts were determined to be moderate, but that impacts are expected to be lower under Alternative 4 than under Alternatives 2 or 3.

While Alternative 1 is the environmentally preferable alternative and would result in the least adverse impacts to park resources, it was not selected for implementation because it would not meet the objectives of the Plan/SEIS related to visitor use, experience, and accessibility. Although administrative use would continue under Alternative 1, no public OSV use would be allowed, and therefore visitors who do not have the ability or skill to ski or snowshoe into the park would not be provided the opportunity to experience and be inspired by Yellowstone's unique winter resources and values. The vast majority of comments received during the SEIS process acknowledged that OSV use is necessary to access the interior of the park, where many of the park's unique resources are located, and indicated that some level of public OSV use should be allowed in the park.

Alternative 2 in the final Plan/SEIS would have allowed OSV use at the same levels as authorized under the recent interim regulations. Alternative 2 was not selected for implementation because it would have greater adverse impacts on park resources than would the Selected Alternative; it would not allow as many visitors to experience the park in winter as the Selected Alternative would; it would not provide opportunities for visitor capacity to grow during the life of the plan; it would not allow non-commercially guided use; and it would not promote advances in OSV technology as well as the Selected Alternative does.

Alternative 2 would result in greater adverse impacts to wildlife and the natural soundscape than would the Selected Alternative. Under Alternative 2, there could potentially be as many as 237 transportation events (unique interactions with visitors and wildlife) in the park each day (a worst-case scenario, if all snowmobile trips were made up of one commercial guide and one rider). Based on the historical average group size of 7 snowmobiles per group (8-year average), there would likely be approximately 123 transportation events in the park per day, versus the 110 transportation events allowed under the Selected Alternative. This results in more than 10 percent more transportation events under Alternative 2 than are

allowed under the Selected Alternative, which means there is the potential for greater adverse impacts to park wildlife and natural soundscapes compared to the Selected Alternative.

Regarding impacts to the park's natural soundscapes, OSV use under Alternative 2 would be audible for a greater percentage of the time in both the travel corridor and the backcountry than the Selected Alternative, and Alternative 2 would have a higher 8-hour L_{EQ} (see SEIS for a discussion of L_{EQ}) than the Selected Alternative. In regard to air quality, Alternative 2 would result in the highest levels of CO emitted under any alternative considered. Depending on the mix of snowmobiles and snowcoaches that is actually seen under the Selected Alternative, Alternative 2 could result in higher or lower 1-hour NO_2 concentration levels than the Selected Alternative, and Alternative 2 would result in more than four times the amount of hydrocarbons released into the atmosphere each winter season than is expected under the Selected Alternative.

Alternative 3 would have implemented a 3-year transition to BAT snowcoaches, thereby eliminating all snowmobile use by visitors in the park. Alternative 3 was not selected for implementation for a number of reasons, including the fact that the Selected Alternative would have greater adverse impacts on park resources such as wildlife and soundscapes than would the Selected Alternative; it would not allow as many visitors to experience the park in winter as the Selected Alternative would; it would not afford opportunities for visitor capacity to grow during the life of the plan; it would not allow non-commercially guided snowmobile use; it would not promote advances in OSV technology as well as the Selected Alternative does; and it would not allow for a variety of visitor experiences because snowmobiles would be eliminated as an option for gaining access to the park's resources and values.

Once the transition to BAT snowcoaches is complete, Alternative 3 would allow for up to 120 transportation events each day. Compared to the 110 transportation events allowed under the Selected Alternative, Alternative 3 would result in more than 8 percent more transportation events than are authorized under the Selected Alternative, which means there is the potential for greater adverse impacts to park wildlife and soundscapes compared to the Selected Alternative. Additionally, Alternative 3 would have a significant negative effect to the visitor experience, since snowmobiles would be abolished as a mode of public transportation in the park.

While the modeling data shows that there would be a greater amount of time where no OSV noise is heard in the travel corridor than would be the case under the Selected Alternative, this advantage is gained at the expense of completely closing the East Entrance, which would result in adverse impacts to visitors and commercial tour operators' ability to access the park. Furthermore, even though the East Entrance would be closed, Alternative 3 has a higher predicted 8-hour L_{EQ} than the Selected Alternative, resulting in greater overall adverse impacts to the park's soundscapes. For a number of reasons, as discussed in the Plan/SEIS, 8-Hour L_{EQ} is the most accurate way to predict the impacts to park soundscapes.

Air quality under Alternative 3 would be similar to the Selected Alternative, with OSVs emitting greater or lesser amounts of each pollutant than the Selected Alternative, depending on the mix of snowmobiles and snowcoaches that is actually seen under the Selected Alternative. Due to the fact that a large number of the snowmobiles entering the park under the Selected Alternative would enter through the West Entrance, if the maximum snowmobile transportation event allocations allowed under the Selected Alternative are used, 1 and 8-hour CO levels at the West Entrance only, would be lower under Alternative 3 than under the Selected Alternative. However, for all other entrances, and for all other scenarios, 1 and 8-hour CO levels for Alternative 3 would be at or higher than levels predicted for the Selected Alternative. Furthermore, the tons per year of CO emitted are expected to be greater under Alternative 3 than under any scenario under the Selected Alternative except for the maximum snowcoach use scenario (maximum of 212 snowcoaches in the park on any day and a maximum seasonal average of 159 snowcoaches per day, Alternative 4D as described in Chapter 2 of the Plan/SEIS), which would allow almost twice the amount of visitors to experience the park on any given day than would Alternative 3. Alternative 3 is expected to result in lower levels of NO_2 emissions than the Selected Alternative, but

would result in 40 percent more hydrocarbons released into the atmosphere each winter season than is expected under any scenario modeled for the Selected Alternative.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The NPS, in accordance with the Department of the Interior NEPA Regulations (43 CFR part 46) and the *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, defines the environmentally preferable alternative as the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources" (43 CFR 46.30).

Alternative 1, the no-action alternative, was identified as the environmentally preferable alternative because public OSV use would no longer be permitted within the park. With winter use limited to minimal administrative OSV use, there would be the least amount of impact on the biological and physical environment within the park. Although administrative OSV use and non-motorized use would occur, the use levels would be low and impacts to resources would be minimal.Because the no-action alternative provides for minimal administrative use to "winter keep" structures in the interior of the park, it would also protect and preserve the park's historic and cultural resources.

CONCLUSION

Overall, of the four alternatives considered in detail in the final Plan/SEIS, the Selected Alternative best meets the purpose, need, and objectives of the final Plan/SEIS and is expected to support the long-term protection, preservation, and restoration of the resources and values of Yellowstone National Park. Adverse environmental impacts that could occur are limited in context and intensity, with direct and indirect impacts that range from negligible to moderate in intensity. None of the impacts related to the implementation of the Selected Alternative will violate the NPS Organic Act or any other applicable law, and implementation of the Selected Alternative will allow the park to protect its resources and values for enjoyment of current and future generations.

The required "no-action period" before approval of the ROD was initiated on February 22, 2013, with the EPA's *Federal Register* notification of the filing of the final plan/EIS (78 FR 12353).

The official responsible for implementing the Selected Alternative is the Superintendent of Yellowstone National Park.

Approved: J. Wessels Date: 21 August 2013

John Wessels, Regional Director
Intermountain Region, National Park Service

ATTACHMENT A

REVISED MODELING RESULTS FOR AIR QUALITY AND PARK SOUNDSCAPES

Air Quality Revised Modeling Results

TABLE 46: MAXIMUM PREDICTED 1-HOUR CARBON MONOXIDE (CO) CONCENTRATIONS (IN PPM)

Alternative	Fleet Assumption	Site 1: West Entrance	Site 2: West Entrance to Madison	Site 3: Canyon to Fishing Bridge	Site 4: Old Faithful Staging Area	Maximum Impact
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	0.5	0.5	0.2	0.2	Minor
Alternative 2: Continue Snowmobile/Snowcoach Use at 2012/2013 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	10.6	0.9	0.3	0.3	Minor
	2b - 318 snowmobiles and 78 BAT Snowcoaches	9.8	0.8	0.3	0.3	Minor
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	120 BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	0.7	0.9	0.3	0.2	Minor
Alternative 4: Manage OSV Use by Transportation Events (110 Events)	**4a** - 480 New BAT Snowmobiles, 60 BAT Snowcoaches	8.9	0.5	0.2	0.3	Minor
	4b - 20 New BAT Snowmobiles, 106 BAT Snowcoaches	0.6	0.8	0.3	0.2	Minor
	4c - 480 E-BAT Snowmobiles and 120 BAT Snowcoaches	6.2	0.8	0.3	0.2	Minor
	4d - 20 New BAT Snowmobiles, 212 BAT Snowcoaches	0.7	1.5	0.4	0.2	Minor

Note: The 1-hour NAAQS for CO is 35 ppm and the stricter Montana state standard is 23 ppm.

TABLE 47: MAXIMUM PREDICTED 8-HOUR CARBON MONOXIDE (CO) CONCENTRATIONS (IN PPM)

Alternative	Fleet Assumption	Site 1: West Entrance	Site 2: West Entrance to Madison	Site 3: Canyon to Fishing Bridge	Site 4: Old Faithful Staging Area	Maximum Impact
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	0.2	0.2	0.2	0.2	Negligible
Alternative 2: Continue Snowmobile/Snowcoach Use at 2012/2013 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	1.6	0.3	0.2	0.2	Minor
	2b - 318 snowmobiles and 78 BAT Snowcoaches	1.4	0.3	0.2	0.2	Minor
Alternative 3: Transition to Snowcoaches Meeting BAT Snowcoaches Requirements Only	120 BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	0.2	0.3	0.2	0.2	Minor
Alternative 4: Manage OSV Use by Transportation Events (110 Events)	**4a** - 480 New BAT Snowmobiles, 60 BAT Snowcoaches	1.3	0.2	0.2	0.2	Minor
	4b - 20 New BAT Snowmobiles, 106 BAT Snowcoaches	0.2	0.2	0.2	0.2	Negligible
	4c - 480 E-BAT Snowmobiles and 120 BAT Snowcoaches	1	0.3	0.2	0.2	Minor
	4d - 20 New BAT Snowmobiles, 212 BAT Snowcoaches	0.2	0.4	0.2	0.2	Minor

Note: The 8-hour NAAQS for CO is 9 ppm.

TABLE 48: MAXIMUM PREDICTED 1-HOUR NITROGEN DIOXIDE (NO_2) CONCENTRATIONS (IN PPB)

Alternative	Fleet Assumption	Site 1: West Entrance	Site 2: West Entrance to Madison	Site 3: Canyon to Fishing Bridge	Site 4: Old Faithful Staging Area	Maximum Impact
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	9.3	11.3	4.3	0.4	Minor
Alternative 2: Continue Snowmobile/Snowcoach Use at 2012/2013 Winter Season Interim Regulation Limits	2a - Current Fleet, 318 snowmobiles and 78 snowcoaches	28.3	49.2	15.5	0.6	Minor
	2b - 318 snowmobiles and 78 BAT Snowcoaches	22.6	44.9	14.5	0.5	Minor
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	120 BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	19.3	16.9	6	0.5	Minor
Alternative 4: Manage OSV Use by Transportation Events (110 Events)	4a - 480 New BAT Snowmobiles, 60 BAT Snowcoaches	32.6	70.1	22.2	0.5	Moderate
	4b - 20 New BAT Snowmobiles, 106 BAT Snowcoaches	10.3	19.3	7	0.4	Minor
	4c - 480 E-BAT Snowmobiles and 120 BAT Snowcoaches	30.2	49.7	16	0.5	Moderate
	4d - 20 New BAT Snowmobiles, 212 BAT Snowcoaches	19.3	28.3	7	0.7	Minor

Note: The NAAQS for NO_2 is 100 ppb, for the 1-hour averaging period.

TABLE 49: MAXIMUM PREDICTED 24-HOUR $PM_{2.5}$ CONCENTRATIONS (IN $\mu G/M^3$)

Alternative	Fleet Assumption	Site 1: West Entrance	Site 2: West Entrance to Madison	Site 3: Canyon to Fishing Bridge	Site 4: Old Faithful Staging Area	Maximum Impact
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	1.4	1.4	1.4	1.4	Negligible
Alternative 2: Continue Snowmobile/Snowcoach Use at 2012/2013 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	2	1.4	1.4	1.4	Negligible
	2b - 318 snowmobiles and 78 BAT Snowcoaches	1.7	1.4	1.4	1.4	Negligible
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	120 BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	1.4	1.4	1.4	1.4	Negligible
Alternative 4: Manage OSV Use by Transportation Events (110 Events)	**4a** - 480 New BAT Snowmobiles, 60 BAT Snowcoaches	2.5	1.4	1.4	1.5	Negligible
	4b - 20 New BAT Snowmobiles, 106 BAT Snowcoaches	1.5	1.4	1.4	1.4	Negligible
	4c - 480 E-BAT Snowmobiles and 120 BAT Snowcoaches	2.7	1.4	1.4	1.5	Negligible
	4d - 20 New BAT Snowmobiles, 212 BAT Snowcoaches	1.5	1.4	1.4	1.4	Negligible

Note: The NAAQS for $PM_{2.5}$ is 35 micrograms per cubic meter ($\mu g/m^3$), for the 24-hour averaging period.

TABLE 51: PARKWIDE TOTAL WINTER SEASON MOBILE SOURCE EMISSIONS

Alternative	Fleet Assumption	Carbon Monoxide (CO)		Hydrocarbon		Nitrogen Oxides (NO_x)		Particulate Matter (PM)	
		lb/day	tpy	lb/day	tpy	lb/day	tpy	lb/day	tpy
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	502	23	20	1	108	5	0.3	0.02
Alternative 2: Continue Snowmobile/Snowcoach Use at 2012/2013 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	3343	150	152	6.8	874	39	2.5	0.11
	2b - 318 snowmobiles and 78 BAT Snowcoaches	2859	129	89	4	805	36	2.4	0.11
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	120 BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	2,852	128	28	1	272	12	1	0.03
Alternative 4: Manage OSV Use by Transportation Events (110 Events)	**4a** – 480 New BAT Snowmobiles, 60 BAT Snowcoaches	1332	60	20	0.9	1,227	55	3.3	0.15
	4b - 20 New BAT Snowmobiles, 106 BAT Snowcoaches	2339	105	13	0.6	329	15	0.7	0.03
	4c - 480 E-BAT Snowmobiles and 120 BAT Snowcoaches	2930	132	20	0.9	892	40	3.4	0.15
	4d - 20 New BAT Snowmobiles, 212 BAT Snowcoaches	5457	246	19	0.9	421	19	0.8	0.03

Soundscape Revised Modeling Results

TABLE 55: TRAVEL CORRIDOR PERCENT TIME AUDIBLE MODELING RESULTS

Alternative	Fleet Assumption	Percent of Travel Corridor by Percent Time Audible Categories				
		0% Time Audible	1 to 20% Time Audible	21 to 50% Time Audible	51 to 80% Time Audible	Over 80% Time Audible
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	32.1	52.8	14.3	0.8	0
Alternative 2: Continue Snowmobile/Snowcoach Use at 2011/2012 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	13.2	38.9	26.4	17	4.5
	2b - 318 snowmobiles and 78 BAT Snowcoaches	13.2	41.3	26.2	15.8	3.5
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	27.7	32.6	20.9	13.6	5.2
Alternative 4a: Manage OSV Use by Transportation Events (480 snowmobiles/60 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	15.6	41.8	26	14.1	2.5
Alternative 4b: Manage OSV Use by Transportation Events (20 snowmobiles/106 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	17.1	39.5	25.8	14.6	3
Alternative 4c: Manage OSV Use by Transportation Events (480 snowmobiles, 120 snowcoaches)	E-BAT Snowmobiles and BAT Snowcoaches	15.2	48.6	25.2	9.7	1.3
Alternative 4d: Manage OSV Use by Transportation Events (20 snowmobiles/212 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	15	50.1	25	8.8	1.1

TABLE 56: BACKCOUNTRY PERCENT TIME AUDIBLE MODELING RESULTS

Alternative	Fleet Assumption	Percent of Backcountry Area by Percent Time Audible Categories				
		0% Time Audible	1 to 20% Time Audible	21 to 50% Time Audible	51 to 80% Time Audible	Over 80% Time Audible
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	97.2	2.7	0.1	0	0
Alternative 2: Continue Snowmobile/Snowcoach Use at 2011/2012 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	92.8	6	0.9	0.2	0.1
	2b - 318 snowmobiles and 78 BAT Snowcoaches	92.8	6.2	0.8	0.2	0
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	95.5	3.6	0.7	0.2	0
Alternative 4a: Manage OSV Use by Transportation Events (480 snowmobiles/60 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	94.4	4.8	0.6	0.2	0
Alternative 4b: Manage OSV Use by Transportation Events (20 snowmobiles/106 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	95	4.2	0.6	0.2	0
Alternative 4c: Manage OSV Use by Transportation Events (480 snowmobiles, 120 snowcoaches)	E-BAT Snowmobiles and BAT Snowcoaches	94.1	5.6	0.3	0	0
Alternative 4d: Manage OSV Use by Transportation Events (20 snowmobiles/212 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	93.9	5.9	0.2	0	0

Note: Percent time audible calculated for the 8-hour period from 8:00 a.m. to 5:00 p.m.

TABLE 57: TRAVEL CORRIDOR AUDIBLE L_{EQ} MODELING RESULTS

Alternative	Fleet Assumption	Percent of Travel Corridor Area by Audible Leq Categories				
		0 dBA or Less	1 to 20 dBA	21 to 35 dBA	36 to 60 dBA	Over 60 dBA
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	31.1	39.4	24.6	4.8	0.1
Alternative 2: Continue Snowmobile/Snowcoach Use at 2011/2012 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	13.8	41.9	37.3	6.6	0.4
	2b - 318 snowmobiles and 78 BAT Snowcoaches	13.8	44	35.7	6.2	0.3
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	27.7	34.2	32.2	5.7	0.2
Alternative 4a: Manage OSV Use by Transportation Events (480 snowmobiles/60 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	16.5	45.4	32.5	5.5	0.1
Alternative 4b: Manage OSV Use by Transportation Events (20 snowmobiles/106 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	16.8	40.1	36.9	6	0.2
Alternative 4c: Manage OSV Use by Transportation Events (480 snowmobiles, 120 snowcoaches)	E-BAT Snowmobiles and BAT Snowcoaches	13.7	55.7	25.8	4.7	0.1
Alternative 4d: Manage OSV Use by Transportation Events (20 snowmobiles/212 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	13.8	52.7	28.3	5.1	0.1

TABLE 58: BACKCOUNTRY AUDIBLE L_{EQ} MODELING RESULTS

Alternative	Fleet Assumption	Percent of Backcountry Area by Audible Leq Categories			
		0 dBA or Less	1 to 10 dBA	11 to 20 dBA	Over 20 dBA
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	97.1	1.2	1.7	0
Alternative 2: Continue Snowmobile/Snowcoach Use at 2011/2012 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	93.2	4	2.8	0
	2b - 318 snowmobiles and 78 BAT Snowcoaches	93.2	4.2	2.6	0
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	95.5	1.1	3.4	0
Alternative 4a: Manage OSV Use by Transportation Events (480 snowmobiles/60 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	94.7	2.8	2.5	0
Alternative 4b: Manage OSV Use by Transportation Events (20 snowmobiles/106 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	94.9	1.3	3.8	0
Alternative 4c: Manage OSV Use by Transportation Events (480 snowmobiles, 120 snowcoaches)	E-BAT Snowmobiles and BAT Snowcoaches	93.2	5	1.8	0
Alternative 4d: Manage OSV Use by Transportation Events (20 snowmobiles/212 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	93.2	4	2.8	0

TABLE 59: TRAVEL CORRIDOR PEAK 4 MODELING RESULTS

Alternative	Fleet Assumption	Percent of Travel Corridor Area by Peak 4 Categories					
		0 dBA or Less	1 to 20 dBA	21 to 35 dBA	36 to 60 dBA	61 to 80 dBA	Over 80 dBA
Alternative 1: No-Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	17.8	22.3	31.7	26.2	2	0
Alternative 2: Continue Snowmobile/Snowcoach Use at 2011/2012 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	7.7	23	36	31	2.2	0.1
	2b - 318 snowmobiles and 78 BAT Snowcoaches	7.7	23	36	31	2.2	0.1
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	21	28.6	35	14.3	1.1	0.1
Alternative 4a: Manage OSV Use by Transportation Events (480 snowmobiles/60 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	9.7	28.1	38.1	22.5	1.5	0.1
Alternative 4b: Manage OSV Use by Transportation Events (20 snowmobiles/106 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	10.2	30.4	39.8	18.2	1.3	0.1
Alternative 4c: Manage OSV Use by Transportation Events (480 snowmobiles, 120 snowcoaches)	E-BAT Snowmobiles and BAT Snowcoaches	8.3	25.5	39.8	24.5	1.8	0.1
Alternative 4d: Manage OSV Use by Transportation Events (20 snowmobiles/212 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	8.3	25.7	39.8	24.3	1.8	0.1

TABLE 60: BACKCOUNTRY PEAK 4 MODELING RESULTS

Alternative	Fleet Assumption	Percent of Backcountry Area by Peak 4 Categories					
		0 dBA or Less	1 to 10 dBA	11 to 20 dBA	21 to 30 dBA	31 to 35 dBA	Over 35 dBA
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	88.1	6.4	4.1	1.3	0.1	0
Alternative 2: Continue Snowmobile/Snowcoach Use at 2011/2012 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	86.7	7.2	4.6	1.4	0.1	0
	2b - 318 snowmobiles and 78 BAT Snowcoaches	86.7	7.2	4.6	1.4	0.1	0
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	91.5	5.4	2.7	0.4	0	0
Alternative 4a: Manage OSV Use by Transportation Events (480 snowmobiles/60 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	89.7	6.2	3.5	0.6	0	0
Alternative 4b: Manage OSV Use by Transportation Events (20 snowmobiles/106 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	90.5	6	3.1	0.4	0	0
Alternative 4c: Manage OSV Use by Transportation Events (480 snowmobiles, 120 snowcoaches)	E-BAT Snowmobiles and BAT Snowcoaches	88.1	6.9	4	1	0	0
Alternative 4d: Manage OSV Use by Transportation Events (20 snowmobiles/212 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	88.1	6.9	4	1	0	0

TABLE 61: TRAVEL CORRIDOR 8-HOUR L_{EQ} MODELING RESULTS

Alternative	Fleet Assumption	Percent of Travel Corridor Area by 8-hour Leq Categories			
		< 15 dBA (Negligible)	≥ 15 and < 25 dBA (Minor)	≥ 25 and < 35 dBA (Moderate)	≥ 35 dBA (Major)*
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	79.6	14	4.2	2.2
Alternative 2: Continue Snowmobile/Snowcoach Use at 2011/2012 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	58	24.3	13.2	4.6
	2b - 318 snowmobiles and 78 BAT Snowcoaches	60	23.6	12.3	4.1
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	64.3	20.5	11	4.1
Alternative 4a: Manage OSV Use by Transportation Events (480 snowmobiles/60 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	64.1	22.2	10	3.7
Alternative 4b: Manage OSV Use by Transportation Events (20 snowmobiles/106 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	60.1	24.2	11.7	4
Alternative 4c: Manage OSV Use by Transportation Events (480 snowmobiles, 120 snowcoaches)	E-BAT Snowmobiles and BAT Snowcoaches	72.4	18.4	6.4	2.8
Alternative 4d: Manage OSV Use by Transportation Events (20 snowmobiles/212 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	70.7	19.2	6.9	3.2

TABLE 62: BACKCOUNTRY 8-HOUR L_{EQ} MODELING RESULTS

Alternative	Fleet Assumption	Percent of Backcountry Area by 8-hour Leq Categories			
		< 5 dBA (Negligible)	≥ 5 and < 15 dBA (Minor)	≥ 15 and < 25 dBA (Moderate)	≥ 25 dBA (Major)*
Alternative 1: No Action - No Snowmobile/Snowcoach Use	Administrative Use, Current Fleet	99.8	0.2	0	0
Alternative 2: Continue Snowmobile/Snowcoach Use at 2011/2012 Winter Season Interim Regulation Limits	**2a** - Current Fleet, 318 snowmobiles and 78 snowcoaches	98.9	1	0.1	0
	2b - 318 snowmobiles and 78 BAT Snowcoaches	99	0.9	0.1	0
Alternative 3: Transition to Snowcoaches Meeting BAT Requirements Only	BAT Snowcoaches, No Snowmobiles (modeling scenario 3b)	99	0.9	0.1	0
Alternative 4a: Manage OSV Use by Transportation Events (480 snowmobiles/60 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	99.2	0.7	0	0
Alternative 4b: Manage OSV Use by Transportation Events (20 snowmobiles/106 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	99	0.9	0.1	0
Alternative 4c: Manage OSV Use by Transportation Events (480 snowmobiles, 120 snowcoaches)	E-BAT Snowmobiles and BAT Snowcoaches	99.7	0.3	0	0
Alternative 4d: Manage OSV Use by Transportation Events (20 snowmobiles/212 snowcoaches)	New BAT Snowmobiles, BAT Snowcoaches	99.6	0.4	0	0

ATTACHMENT B

YELLOWSTONE NATIONAL PARK WINTER USE PLAN/SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT NON-IMPAIRMENT DETERMINATION FOR THE NATIONAL PARK SERVICE SELECTED ALTERNATIVE

National Park Service (NPS) *Management Policies 2006* (section 1.4) require analysis of potential effects to determine whether or not an NPS action would impair a park's resources and values. The Selected Alternative for managing winter use in the interior of Yellowstone National Park (Park) is Alternative 4, with some minor modifications as described in the Record of Decision.

The fundamental purpose of the national park system, established by the *Organic Act* and reaffirmed by the *General Authorities Act*, as amended, is to conserve park resources and values for the enjoyment of future generations. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give the NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park. That discretion is limited by the statutory requirement that the NPS must leave resources and values unimpaired unless a particular law directly and specifically provides otherwise.

NPS *Management Policies 2006* (section 1.4.7.1) also prohibit unacceptable impacts, which are defined as, "impacts that fall short of impairment, but are still not acceptable within a particular park's environment." During the impairment analysis, the Selected Alternative was also evaluated for unacceptable impacts. The NPS has concluded that for the same reasons no impairment to Park resources or values will occur (discussed below), no unacceptable impacts will occur as a result of implementation of the Selected Alternative.

Pursuant to NPS *Management Policies 2006,* impairment is an impact that, in the professional judgment of the responsible NPS manager, "would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values." Whether an impact constitutes impairment depends on the particular resources that would be affected; the severity, duration, and timing of the impact; the direct and

indirect effects of the impact; and the cumulative effects of the impact in question and other impacts.

An impact on any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the Park; or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Impairment may result from visitor activities, NPS administrative activities, or activities undertaken by concessioners, contractors, and others operating in a park. Impairment may also result from sources or activities outside a park.

For the Selected Alternative, a determination of non-impairment is made for each of the impact topics carried forward for detailed analysis in the Supplemental Environmental Impact Statement (SEIS). Pursuant to the *Guidance for Non-Impairment Determinations and the NPS NEPA Process* (2011), impairment findings are not necessary for visitor experience, socieoeconomics, public health and safety, environmental justice, land use, or park operations because these impact topics are not generally considered to be park resources or values, and are therefore not subject to the written impairment determination requirement found in NPS *Management Policies 2006.* A description of the current state of each of the resource topics evaluated for impairment can be found in Chapter 3 of the SEIS, "Affected Environment".

The Park's purpose and significance were considered during the impairment determination process for the Selected Alternative. Congress established Yellowstone National Park to

"dedicate and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people… for the preservation, from injury or spoliation, of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition" (U.S. Congress 1872). Yellowstone National Park's purpose and significance are rooted in its legislation and its natural and cultural resources.

Statements of a park's significance describe why a park is important within a global, national, regional, and ecosystem-wide context and are directly linked to the purpose of the park.

Yellowstone National Park is significant for the following reasons:

- It is the world's first national park.
- It preserves geologic wonders, including the world's most extraordinary collection of geysers, hot springs, and the underlying volcanic activity that sustains them. Yellowstone National Park is positioned on a "hot spot" where the earth's crust is unusually thin and molten magma rises relatively close to the surface.
- It preserves abundant and diverse wildlife in one of the largest remaining intact and wild ecosystems on earth, supporting surrounding ecosystems and serving as a benchmark for understanding nature.
- It preserves an 11,000-year continuum of human history, including sites, structures, and events that reflect our shared heritage. This history includes the birthplace of the national park idea—a milestone in conservation history.
- It provides for the benefit, enjoyment, education, and inspiration of this and future generations. Visitors have a range of opportunities to experience the essence of Yellowstone National Park's wonders and wildness in a way that honors the Park's value to the human spirit and deepens the public's understanding and connection to it.

The mission statement of Yellowstone National Park is:

> Preserved within Yellowstone National Park are Old Faithful and the majority of the world's geysers and hot springs. An outstanding mountain wildland with clean water and air, Yellowstone is home of the grizzly bear and wolf and free-ranging herds of bison and

elk. Centuries old sites and historic buildings that reflect the unique heritage of America's first national park are also protected. Yellowstone National Park serves as a model and inspiration for national parks throughout the world. The National Park Service preserves, unimpaired, these and other natural and cultural resources and values for the enjoyment, education, and inspiration of this and future generations.

Wildlife and Wildlife Habitat

Wildlife and wildlife habitat are necessary to fulfill the purposes for which Yellowstone was established. Wildlife and its habitats are vital components of the Yellowstone ecosystems identified in the Park's purpose and significance statements, as well as the mission statement. Yellowstone provides winter habitat for many terrestrial wildlife species. Winter use of the Park by ungulates such as elk and bison is widespread, and herds of these large ungulates are focal points for visitors. Elk and bison, identified as species that could be affected by winter use, have been the subject of numerous studies related to motorized oversnow vehicle (OSV) and non-motorized uses. In addition to elk and bison, two species listed or treated as threatened (species of special concern in the Park) under the Endangered Species Act (ESA) that could be impacted by OSV use are Canada lynx (*Lynx canadensis*) and grizzly bears. Wolverines have also recently been proposed for listing under the ESA by the US Fish and Wildlife Service. Due mainly to their hibernation patterns and late season closure of the Park's backcountry, grizzly bears are unlikely to experience adverse effects from winter use and were therefore not carried forward for detailed analysis in the SEIS (see "Issues Considered but Dismissed from Further Analysis" in Chapter 1 of the SEIS).

Winter use, as proposed under the Selected Alternative, will have some effects on wildlife, just like every other form of visitor access to the Park. However, only minor to moderate impacts to wildlife are expected to result from implementation of the Selected Alternative. Extensive studies of the behavioral responses to oversnow traffic of the species evaluated (elk, bison, wolves, lynx, wolverine, trumpeter swans, and eagles) have shown that these animals rarely exhibit high-intensity responses (movement, defense postures, or flight) to approaching vehicles. Non-motorized use has also been shown to cause minor adverse effects to wildlife. The individual responses of wildlife to OSV use do not rise to the level of the "taking" or disturbance that is prohibited by NPS regulations. Furthermore, the US Fish and Wildlife Service has

concurred with the NPS determination that the impacts of OSV use under the Selected Alternative may affect, but are not likely adversely affect, Canada lynx, designated critical habitat for lynx, and wolverine.

Thirty-five plus years of census data do not reveal any relationship between changing winter use patterns and elk or bison population dynamics. No wildlife populations are currently declining due to winter use (swan populations are declining, but this decline is being experienced regionally and due to factors unrelated to winter use in the Park or region). In fact, during the last decade or more, OSV use levels have been equal to and higher than those called for under the Selected Alternative, and populations of species such as grizzly bears and wolves have increased dramatically (USFWS 2010, Smith et al. 1998, 2005, 2006, 2007).

Under the Selected Alternative, motorized oversnow vehicle use will be well below levels previously studied by NPS wildlife biologists and well within the limits discussed by those studies and the *Scientific Assessment of Winter Use* prepared during the planning process. Based upon this information, there is no reason to suspect that winter use at the proposed levels under the Selected Alternative will pose a risk of impairment to any wildlife. OSV use will be 100 percent guided, thus reducing or even eliminating altogether any chances of wildlife harassment. Impact analysis in the SEIS clearly demonstrates that the Selected Alternative will not interfere with wildlife ecology for any species. If the Selected Alternative is implemented, the Park will meet its mission of preserving these natural resources and associated values unimpaired, and retain its significance in the overall conservation of abundant and diverse wildlife in one of the largest remaining intact and wild ecosystems on earth, supporting surrounding ecosystems and serving as a benchmark for understanding nature.

For all species carried forward for detailed analysis, impacts from the implementation of the Selected Alternative include potential displacement of individual animals, potential behavioral and physiological responses of individual animals, and potential small-scale, local population-level impacts. However, in each instance, impacts from motorized oversnow vehicles and non-motorized users will be relatively low, as disclosed in Chapter 4 of the SEIS. The vast majority of wildlife numbers and habitat will remain intact to allow both individuals and populations to flourish. Therefore, no wildlife or wildlife habitat will be impaired as a result of the implementation of the Selected Alternative.

Bison and Elk

Scientists have not observed any large-scale shifts in habitat use due to the presence of OSVs, skiers, or snowshoers in the Park. A small percent of both bison and elk have demonstrated limited flight responses from OSVs or skiers and some avoidance of OSV use areas, resulting in small scale and temporary shifts in habitat use by bison or elk (White et al. 2009). However, even with the projected level of impact, the impacts to individual elk and bison will be short-term and localized, and impacts to elk and bison populations will be barely noticeable over the long-term, if at all. Impacts will occur to relatively few individuals, and the vast majority of wildlife numbers and habitat will remain intact to allow both individuals and populations to flourish. Elements of the Selected Alternative such as the OSV guiding requirement, and the requirement for Best Available Technology (BAT) snowmobiles and snowcoaches will further ensure that impacts to the Park's bison and elk remain low.

Lynx and Wolverine

Adverse impacts of the Selected Alternative on lynx and wolverine will be at most localized and short-term, and will be mitigated through OSV management measures that include a two week closure of Sylvan Pass at the end of the winter season – the critical breeding periods for these species. Use across Sylvan Pass will be quite low. Impacts will occur to relatively few individuals, and the vast majority of wildlife numbers and habitat will remain intact to allow both individuals and populations to flourish. As noted above, the US Fish and Wildlife Service has concurred with the NPS determination that the impacts of OSV use under the Selected Alternative may affect, but are not likely adversely affect, Canada lynx, designated critical habitat for lynx, and wolverine.

The end of season closure of the East Entrance and Sylvan Pass will mitigate the impacts of OSVs on wolverine in the area near Sylvan Pass, but OSV use will still overlap with the breeding season by about two weeks. Effects resulting from OSV use on the Sylvan Pass road and maintenance activities could have a small impact on reproductive success of denning wolverine females, but no injury or mortality to wolverine will occur as a result of implementation of the Selected Alternative, and impacts to the species are expected to remain within levels seen in the past nine winter seasons, which has not resulted in impairment.

Impacts to lynx could occur because their mating season also overlaps OSV use in the Park by about 2 weeks, and lynx travel may be limited in certain circumstances by groomed roads necessary for OSV use. However, the low level of OSV use and the early closure of the East Entrance will minimize OSV impacts to lynx in this area. No injury or mortality to lynx will occur as a result of implementation of the Selected Alternative, and impacts to the species under the Selected Alternative are expected to remain within levels seen in the past nine winter seasons, which has not resulted in impairment.

Trumpeter Swans and Eagles

Impacts to trumpeter swans and eagles will occur to relatively few individuals, and the vast majority of wildlife numbers and habitat will remain intact to allow both individuals and populations to flourish. While trumpeter swan populations are declining in the Park, there are successful swan breeding territories near motorized routes in the Greater Yellowstone Area outside Yellowstone (McEneaney 2006), and winter use has not been shown to be a primary factor in the decline of the resident swan population (Proffitt et al. 2008).

Behavioral observations under recent use levels at or above the levels proposed under the Selected Alternative show limited displacement and few energetically costly behavioral responses, which likely limits any potential for physiological responses in swans and eagles (Hardy 2001; White et al. 2008). Therefore, the majority of both swans and eagles are expected to demonstrate at most, limited responses to OSVs and non-motorized users under the use limits proposed for the Selected Alternative. Impacts on swans and eagles will be localized and short-term, ranging from not observable or measureable, to at most an impact on relatively few individuals. No injury or mortality to trumpeter swans or eagles will occur as a result of implementation of the Selected Alternative.

Gray Wolves

Impacts to wolves under the Selected Alternative will be rare, localized, and short-term. During the past nine years, winter road monitoring crews have rarely observed behavioral responses by wolves to OSVs in Yellowstone due to infrequent encounters, with a total of only 14 sightings of wolf-OSV interaction over this time period. Wolves appear to avoid interaction with OSV users, and there is no evidence from wolf territories in the Park of large-scale displacement or habitat

avoidance (Smith et al. 2005). Wolf tracks were frequently observed on roads at night, suggesting that wolves travel on roads during that time to conserve energy, but avoid OSV activity (Smith et al. 2005; Smith 2006). Extensive wolf-watching occurs in the northern portions of the Park with no apparent effect on wolves. Wolf populations in the Park have grown during periods of much higher OSV use than those proposed under the Selected Alternative (Smith et al. 1998, 2005, 2006, 2007). Overall, impacts to gray wolves will be barely noticeable, if at all, and the vast majority of wolf numbers and habitat will remain intact to allow both individuals and populations to flourish.

Air Quality

Yellowstone National Park is classified as a Class I area. Class I areas are those where Congress enacted a special visibility protection measure for areas where visibility is an important value (NPS 2005). Maintaining the Park's air quality is necessary to fulfill the purposes for which Yellowstone was established. The importance of air quality in Yellowstone can be seen in its significance and mission (both stated above). The ability of Yellowstone to provide for "the benefit, enjoyment, education, and inspiration of this and future generations" and for visitors to experience the essence of Yellowstone National Park's wonders and wildness is achieved, in part, by the air quality maintained within the Park. The importance of air quality is further noted in the Park's mission, which describes the Park as "an outstanding mountain wildland with clean water and air." Both monitoring of use levels at or above the levels proposed under the Selected Alternative and modeling of the Selected Alternative reveal that under the Selected Alternative, air quality, in the Park, including visibility, will remain very good.

Adverse impacts of the Selected Alternative to air quality in the Park will be minor in intensity for the most part, except that in under certain use scenarios there is the potential for impacts to rise the a level that will result in impacts of a moderate intensity, specific to 1-hour nitrogen dioxide (NO_2) concentration levels. These impacts will be mitigated though OSV management measures that include the requirement for BAT snowmobiles and snowcoaches.

Under the Selected Alternative, no perceptible visibility impacts are expected. Motorized OSV use will result in emissions that are well below all regulatory standards, never rising to more than 50% of the 1 or 8-hour standards for any pollutant except for NO_2, which could rise to 70% of

the 1-hour standards under certain use scenarios, but no higher. Under the Selected Alternative, the Park will maintain its significance and meet its mission of providing enjoyment of the clean mountain air. Therefore, there is no reason to suspect that winter use at the proposed levels under the Selected Alternative will pose a risk of impairment to the Park's air quality.

Soundscapes

The soundscape at Yellowstone National Park includes both natural and human components. The "natural quiet" that occurs in the absence of human sound sources is also defined as the "natural ambient" sound level of a Park. These natural ambient sound conditions exist in the absence of any human produced noises. Common natural ambient sounds at Yellowstone include bird and animal calls, running water, wind, and thermal activity (e.g., geysers and hot springs). Non-natural sounds include those produced by snowmobiles, snowcoaches, snow groomers, aircraft, human voices, wheeled vehicles and building operations (Burson 2009). These sounds may be heard as a composite of sound, not individually. Like air quality, the soundscapes in the Park are a component of the essence of Yellowstone's wonders and wildness that contribute to the Park's significance. In addition, the retention of the natural curiosities and wonders within Yellowstone, the reason why the Park was established, includes retaining natural sounds.

Under the Selected Alternative, impacts to soundscapes will result from both administrative and visitor OSV use. Impacts to soundscapes from this use will be localized to the travel corridors themselves, with some low level sounds from motorized OSV use detectable in small portions of the backcountry area immediately adjacent to the travel corridors. Winter silence will predominate away from developed areas and road corridors, and OSV noise will be barely perceptible to nonexistent for large portions of the day along many of the travel corridors, which exist to accommodate motorized travel.

The Selected Alternative calls for sound levels that provide for periods of quiet and large periods of the day that are below 35 decibels, which is a desired background level for empty classrooms and auditoria, where quiet and outstanding listening conditions are important. Under the Selected Alternative, visitors will have the opportunity to experience natural sounds including the ability to hear clearly the delicate and quieter intermittent sounds of nature, the ability to experience interludes of extreme quiet for their own sake, and the opportunity to do so for

extended periods of time. The Park will continue to be able to provide for high quality visitor enjoyment of its soundscape wonders and wildness, and therefore there is no reason to suspect that winter use at the proposed levels under the Selected Alternative will pose a risk of impairment to the Park's soundscape.

Conclusion

In the best professional judgment of the NPS decision-maker, based upon the impact analysis in the SEIS, relevant scientific and scholarly studies, advice or insights offered by subject matter experts and others who have relevant knowledge or experience, and the results of civic engagement and public involvement activities, no impairment of Park resources or values will result from implementation of the Selected Alternative.

Approved: J Wessels Date: 21 August 2013

John Wessels, Regional Director

Intermountain Region, National Park Service